The Bristol
Medico-Chirurgical Journal.

JUNE, 1901.

WILLIAM JOHNSTONE FYFFE, A.B., M.D.

It is with great regret that we have to record the death of Dr. William Johnstone Fyffe, who passed away at his residence, 2 Rodney Place, Clifton, on May 17th, at the age of 75.

Though of Scotch parentage, he was born in Co. Tyrone and educated in Ireland. He went to Dublin in 1843, entering as a medical student at the Park Street School of Medicine and at the City of Dublin Hospital. In 1847 he took the degrees of A.B. and M.B. in the University of Dublin, and his name was entered on the list of candidates for the Medical Department of the Army at the recommendation of the Marchioness of Abercorn. One year later he was gazetted to the Assistant-Surgeoncy of the 3rd West India Regiment. In 1849 he sailed from Southampton in the *Great Western* steamship for Barbadoes, and from there proceeded to Grenada, where the transport was nearly wrecked. He resided for two years in Jamaica, and when a severe epidemic of Asiatic cholera visited the island, he volunteered to attend the civil population, for which he was presented with an address and a cheque for £250.

After being invalided home, he was for some time at Dover and Fermoy, and on war being declared against Russia in 1854 he was gazetted to the 30th Regiment and ordered to proceed to Bulgaria. He landed in the Crimea on September 14th, and

was at the battle of the Alma, and marched to Sebastopol; he was present during part of the siege and at the battle of the 26th of October. He was sent to Balaklava, and afterwards, having contracted fever, was sent for recovery to Scutari Hospital.

In 1855 he came home in medical charge of the transport *Sultana* with 200 wounded and sick, and the passage, which was stormy, lasted 64 days. On his arrival in England the men presented him with a most gratifying address, which was published in the *Times* (March 4th, 1855). He then became one of the Staff of the General Military Hospital, Fort Pitt, Chatham, where nearly all the wounded from the Crimea were collected, and subsequently he was appointed Surgeon to the 13th (Prince Albert's) Light Infantry, and afterwards was gazetted to the Surgeoncy of the 5th Dragoon Guards. In 1863 he was appointed Assistant Professor of Medicine in the Army Medical School at the Royal Victoria Hospital, Netley, and held this position for 10 years.

Having completed 25 years' service in the Army, Dr. Fyffe retired in 1873 with the rank of Deputy Surgeon-General, and came to Clifton. Here he practised as a physician, and in 1876 he unsuccessfully contested election to the Physicianship of the Bristol Royal Infirmary. He became Physician to Clifton College in 1882, and held that post for 15 years, and it is from his connection with Clifton College that he will live long in the memory of his medical *confrères* in Clifton. He was a man especially well suited for the post; his commanding presence, his knowledge of mankind and military discipline, his ripe experience of disease and his quick decision made him an exemplary school physician, and one whom masters, boys, and parents looked up to with profound respect. He took an especial interest in sanitation, and during his tenure of office regularly once a term personally inspected the sanitary condition of all the College houses. On his retiring in 1897 he was presented with a silver bowl from the masters, and many expressions of regret from the Council and all connected with the College.

So great was his popularity in the profession in Bristol that

he was the only one unconnected with any public appointment in Bristol who has had the honour of being President of both the local Medical Societies. In 1883 he presided over the Medico-Chirurgical Society, his inaugural address being "On the Nature of the Malarial Poison"; and in 1889 he was President of the Bath and Bristol Branch of the British Medical Association, and delivered a most interesting address on "The Experiences of an Army Surgeon."

In addition to the two presidential addresses, he published a paper on "Diagnosis of Abscess of the Liver," and another on "Epidemic Influenza," introducing an interesting discussion at the Medico-Chirurgical Society in 1890. Other pamphlets which met with great success were "An Address on the Preservation of Health during Schoolboy Life," "A Recent Outbreak of Rötheln" (1892), and "Fifteen Years' Experience of Infectious Diseases in a Public School."

At the Annual Meeting of the British Medical Association which was held in Bristol in 1894, Dr. Fyffe took much interest in the reception, and acted as honorary local treasurer.

After the death of a beloved daughter (Gratian) in 1895, and his wife in 1897, Dr. Fyffe's health began to fail, and his friends saw with dismay that a change was taking place, for instead of being the upright, soldierly man, his gait became more and more stooping, and he gradually grew into the invalid. Medically, his is a somewhat curious case. He consulted Dr. Bright on his return from the Crimea, and came away from his house with the gloomy prognosis of having but few months to live. Since then he had intermittent albuminuria and occasional attacks of gout, but yet lived as a fairly healthy man till his last illness.

He was one of those members of the profession whom we can ill afford to lose. Perhaps somewhat of the old school, his splendid character, his ready sympathy, and his courteous demeanour made him beloved by all who knew him; and if a speech of congratulation, or laudation or condolence, was wanted in private or at a medical meeting, Dr. Fyffe was often the man called upon to make it. At the College, at a club, at the annual medical dinner, and about in Clifton, we

shall for a long time greatly lament and feel the loss of our old friend.

The *Journal* Committee have especial reason to feel that they have lost a much valued colleague, on whose aid the Editor could at all times count, as long as his health and strength lasted, for assistance in the reviewing of books and in any other way which the interests of the *Journal* might demand.

We have to thank the family of Dr. Fyffe for the accompanying photogravure, which will be treasured by the subscribers to the *Journal* as an excellent memento of their old friend.

THE ORIGIN OF GASTRIC ULCER.

BY

W. GORDON, M.A., M.D., M.R.C.P.,

Physician to the Royal Devon and Exeter Hospital; Physician to the West of England Eye Infirmary.

IT is a curious fact that, with all our learning, we have learnt so little of the causes of gastric ulcer. One of the commonest of diseases, one of the most important, familiar clinically, only too familiar on the *post-mortem* table, its origin remains an enigma. But we are well off for theories, and these may be stated as follows :—

1. The theory of embolism of a gastric artery.
2. The theory of thrombosis of a gastric artery.
3. The theory of thrombosis of a gastric vein.
4. The theory of spasm of a gastric artery.
5. The theory of hemorrhage into the gastric wall.
6. The theory of injury of the gastric wall from within—
   (*a*) by scalding material;
   (*b*) by corrosive poisons;
   (*c*) by sharp objects swallowed.

7. The theory of injury of the gastric wall from without—
   (*a*) by tumours, aneurysms, &c.;
   (*b*) by mechanical pressure exerted outside the body, as by a tea-tray.
8. The theory of neurotrophic lesion.
9. The theory of autodigestion from hyperacidity.
10. The theory of bacterial necrosis.

And, finally, the theory that all these are true, and what one will not account for another will.

Let us consider these briefly seriatim.

1. *The theory of embolism of a gastric artery.* The idea that somehow or other gastric ulcer is due to some sort of vascular obstruction is that which still dominates medical opinion. When Rokitansky stated that acute perforating gastric ulcers were not due to inflammation, those who accepted his statement had to seek some other explanation. Rokitansky's own explanation that gastric ulcers were due to hemorrhagic erosion met with as little acceptance in his own day as in ours, and the doctrine of vascular obstruction was formulated by Virchow. Virchow seems to have based his arguments first on the asserted absence of inflammation, and secondly on the form and position of gastric ulcers. That embolism of a gastric artery can cause a gastric ulcer is certain, since Panum and Cohnheim have proved it experimentally. But the question is: "Does it cause the disease as we meet with it in practice?"

Emboli may be considered as of two sorts, viz.: (1) masses of microbes circulating in the blood, and (2) vegetations or clots set loose from the heart or vessels. With regard to 1, we plainly have not such to deal with in ordinary cases of gastric ulcer. Microbic emboli have only been met with in cases of anthrax and other infective disorders. It is in respect of 2 that we must carefully consider this theory. If the theory is correct we ought to find that when a source for emboli is evident, gastric ulcer (a common disease, we must remember) should not be rare, and when gastric ulcer is present, we ought not seldom to discover a source for emboli. What are the facts? When many emboli are being thrown off from the heart valves and embolism is appearing in various organs, the gastric

arteries almost always escape obstruction. Out of seventy-one cases of ulcerative endocarditis producing emboli in the viscera, recorded by Dr. Fenwick[1] at the London Hospital, not one showed embolism in the stomach. Again, experimentally emboli have been thrown in large numbers into the circulation (Fenwick[2]), yet only 3 to 5 per cent., or less, have found their way into the gastric arteries. The only cases in which this author has seen marked embolism of these arteries were very rare cases of disease (aneurysm) of the neighbouring large vessels.[3] Again, it is a familiar fact that the vast majority of patients who present themselves with gastric ulcers have no disease of either heart or vessels capable of producing emboli.

When we put together these two considerations, the rarity of gastric ulcer where a source of embolism exists, and the rarity of a source of emboli where gastric ulcer exists, can any reasonable person contend that gastric ulcer is the result of embolism?

2. *The theory of thrombosis of a gastric artery.* Atheroma of the gastric arteries has in some instances been mentioned as a cause of ulcer, and syphilis has been said to have been the cause in others. But it must be obvious that the young women, in whom perforating gastric ulcer is most common, are far below the age at which atheroma occurs, and, in fact, are clinically known to be free from it; whilst syphilis, in country districts at all events, cannot be the cause in the vast majority of patients.

3. *The theory of thrombosis in a gastric vein.* Müller's experiment of ligaturing the portal vein is far too remote from practical bearing to need discussion, and Fenwick's[4] experiments have shown that the ligature of small gastric veins does not lead to ulceration. Thrombi in the veins or arteries of the floor and sides of an ulcer are a part of the effects of ulceration, and prove nothing about its ætiology.

4. *The theory of spasm of a gastric artery.* This has no reasonable evidence in its favour.

5. *The theory of hemorrhage into the gastric walls.* This was

[1] *Ulcer of the Stomach and Duodenum*, 1900, p. 100.
[2] *Op. cit.*, p. 101. [3] *Ibid.* [4] *Op. cit.*, pp. 104–106.

Rokitansky's theory. He recognised that submucous hemorrhage led to erosion, and concluded that ulcer might be caused by hemorrhage. As Pye-Smith points out[1]: "This must be denied, on the ground that if such were its origin it ought to be frequent in those who suffer from obstruction of the portal circulation, as a result of disease of the heart or liver. Hemorrhagic erosions are, in fact, common in cases of this kind, but not gastric ulcer."

6. *The theory of injury of the gastric walls from within.* Scalding material and corrosive poisons can undoubtedly set up ulceration of the stomach, and perhaps sharp objects swallowed may do the same. But no one will contend that the bulk of the cases which come before one clinically are due to any of these causes.

7. *The theory of injury of the gastric walls from without.* Tumours and aneurysms can produce ulceration of the stomach wall, but such cases are curiosities. The pressure-of-tea-tray theory loses sight of the facts that most gastric ulcers are on the posterior wall of the stomach, and that of those which are on the anterior wall the majority are well under cover of the ribs.

8. *The theory of a neurotrophic origin.* This has no evidence worth discussing to support it.

9. *The theory of autodigestion from hyperacidity.* The argument in favour of this theory seems to amount just to this, that "because hyperacidity of the gastric juce is found in about 66 per cent. of the cases of gastric ulcer, therefore the hyperacidity causes the ulcer." So far as I can ascertain, there is no evidence that hyperacidity precedes the ulcer.

10. *The theory of bacterial necrosis.* Bacterial necrosis is a form of "bacterial infection which is unassociated with the signs of active inflammation."[2] At present little seems to be written on this form of microbic injury, but, at all events, no proof has been brought forward of its occurrence in the human stomach, and, as Dreschfeld says, this view may as yet "be looked upon as purely hypothetical."[3]

[1] Fagge and Pye-Smith, *Principles and Practice of Medicine*, 3rd ed., vol ii., 1891, p. 182.

[2] Sidney Martin, *Diseases of the Stomach*, 1895, p. 410.

[3] Dreschfeld, in Clifford Allbutt's *System of Medicine*, vol. iii., 1897, p. 526.

Finally, there is the theory that all these are true. Probably we shall be dealing liberally with the whole of these theories in suggesting that, taken together, they may perhaps account for 5 per cent. of the cases. What, then, is the origin of the remaining 95 per cent.? May we not admit once for all that we know nothing whatever about it? If gastric ulcer were an altogether new disease, and an acute perforating ulcer were shown to anyone who had studied modern pathology, would not inflammation and microbic invasion almost certainly be the first things he would think of? The reason that we, to whom the disease is far from new, do not turn so naturally to these common agencies is, that we have all been brought up so carefully to believe that inflammation has nothing to do with the development of acute gastric ulcer, and that in chronic gastric ulcer the very evident inflammation is not primary but secondary. Yet, is this belief correct? It dates back to a time when the processes of inflammation were less perfectly understood than they are now, and the statements in the text-books read as if they had been copied faithfully one from the other. If acute gastric ulcer is not inflammatory, how does it form adhesions? To argue that the inflammation which forms the adhesions is secondary is merely to beg the question. In very rare instances gastric ulcers have been found to be tubercular. Were these in their origin also non-inflammatory?

Moreover, this belief originated at a time when gastric ulcers were never seen except on the *post-mortem* table, when not merely the ordinary *post-mortem* changes common to all structures, but *post-mortem* digestion as well, had altered the appearances. What might have looked angrily inflamed in life need not necessarily show naked-eye evidence of inflammation after death. Thus the inflammatory appearances described by Beaumont in the living stomach of Alexis St. Martin are quite unknown to us in the pathology of the dead-house. But now in the operating room we have opportunities of seeing gastric ulcers as they exist in life, and we know that gastric ulcers, which have exhibited *post mortem* the characteristic appearances described by Rokitansky, have been seen during life, during operation, as the centre of a considerable appa-

rently inflammatory thickening.[1] It is remarkable in the recent literature of perforating gastric ulcer, how constant is the statement that a considerable area of inflammatory thickening surrounded the perforation. I have collected from the *Lancets* and *British Medical Journals* of the last ten years all the cases I could find of perforated gastric ulcer. In forty-three of these, operation having been performed, the presence or absence of induration was noted at the time. In forty, more or less induration was found to be present, usually very considerable. In only three was it found to be absent. We can scarcely assume that these cases were all, or nearly all, necessarily different from the so-called "acute perforating ulcer;" for the cases were not selected from the journals, and it is unlikely that so few as only three of those operated on were "acute" and all the rest "chronic." They were also mostly on the anterior surface, where "chronic" ulcers are admittedly less common; and whilst one of the three non-indurated had had eighteen months' symptoms of gastric ulcer, one of the forty indurated had had no previous gastric symptoms at all, and two had had symptoms for a few months only. (Many of the reporters gave no previous history of their patients.)

These considerations make one naturally inclined to accept the more recent observations of Jaworski and Korczinski (quoted by Dreschfeld[2]), who find that "the mucous membrane of the stomach in all cases of gastric ulcers shows changes which become more evident on microscopic examination. These changes consist in a cell-infiltration between the several layers of the coats of the stomach and marked inflammatory changes in the walls of the blood-vessels (both of veins and arteries), and in the neighbourhood of the nerves also. According to these authors the inflammatory changes are constantly found in cases of gastric ulcers, and are looked upon by them as primary." In the case of acute ulcer to which I am about to refer, there was indubitable evidence of inflammation round the edge of the aperture. Surely it seems desirable to reconsider the statement that gastric ulcer is non-inflammatory in its origin, and if it should turn out that gastric

[1] Fenwick, *Op. cit.*, p. 19. [2] *Op. cit.*, p. 523.

ulcer is after all an inflammatory disease, to carefully consider whether the inflammation may not be sometimes at least due to micro-organisms. In the case of the rare tubercular ulcerations, it is manifestly due to micro-organisms. Must we not consider the whole question *de novo*?

As matters stand, it may be at least considered permissible to set aside entirely all preconceived ideas of the pathology of gastric ulcer, and to ask ourselves what we might expect to happen if a culture of some common microbe, such as the staphylococcus aureus, were rubbed into the mucous membrane of the stomach.

We are daily swallowing innumerable microbes, and some at least must be supposed to be capable of setting up suppuration in the tissues. These microbes are carried down in an alkaline medium of mixed food and saliva, and in an anæmic servant-girl are apt to be associated with a surplus of saccharine material, in which they have probably already germinated in abundance. They have then presumably twenty minutes or more in the stomach before the alkaline reaction of the food is changed to an acid reaction, and during that time they are being rubbed and scrubbed all over the gastric mucous membrane by the muscular movements of the gastric wall, and kept warm by the warmth of the organ which contains them. We know that a culture of staphylococcus aureus rubbed for a few minutes into the skin of one's arm is very apt to produce inflammation. Should we be greatly astonished if a similar culture scrubbed into the wall of the stomach were to produce inflammation there? If a patch of gastritis or a mechanical erosion existed on the gastric surface, would not such a result be even likelier to follow? Assume for a moment that this is possible, and consider the various consequences which might ensue. The gastric juice fulfils a twofold purpose; it is at once a digesting and a disinfecting fluid. According, therefore, to the virulence of the micro-organisms and the position of their point of entry, we might have one of several results:—

(*a*) If the micro-organisms were virulent, and the point of entry such that the gastric juice did not speedily reach it, it is conceivable that a focus of acute inflammation

might develop in the thickness of the gastric wall. That wall is not a very thick one, and it would not require a very long time for serious injury to have been done to a circular area of the size of a threepenny piece, extending through the whole thickness of the coats, but with a rather greater diameter on the side of entry. In most cases this area of acute inflammation would be surrounded by a zone of red and swollen tissue just as a boil is, and, in the centre, necrosis would be tending to begin. Now conceive of the effect on this patch of inflammation of an access of gastric juice. Would not the deeply-injured area be simply digested out, leaving a clean-cut circular "punched-out" opening surrounded with a zone of swollen tissue, more or less infiltrated with leucocytes, close to the margin of solution? Such an ulcer would closely correspond with those now described by operators, and as the swelling round the ulcer would have probably quite subsided after death, (operators have already told us they have found this to be the case), we should have *post-mortem* just the type of lesion with which we are familiar, as "acute perforating ulcer" of the stomach.

(*b*) If, on the other hand, the micro-organisms were less virulent, or their point of entry were such that the tide of gastric juice would reach it before they had penetrated far, no result might follow, or at most a trifling erosion of the surface.

(*c*) Between these extremes all variations should be possible. Sometimes the organisms might have time to effect a superficial lodgment, and to excite a patch of superficial inflammation. Then the gastric juice might digest off their covering, produce a superficial erosion, and destroy them in its floor, leaving one of those surface ulcerations which, on healing, leaves scarcely even puckering behind.

(*d*) Or the organisms might have spread deeper before the gastric juice invaded their superficial layers, and a slow alternation of progress of ulcer and digestion of damaged tissue might proceed indefinitely, together with irritation

of the exposed surface, both mechanically by food and chemically by the acid juice. Then we should have steadily-increasing inflammation and a steadily-widening and deepening ulcer, which would adhere to neighbouring organs, and eat its way gradually into their substance. We should, in fact, obtain an ordinary chronic funnel-shaped ulcer.

There is nothing, it seems to me, either inherently improbable or foreign to pathological experience in any of these conceptions. An hypothesis of bacterial origin has, on the contrary, this in its favour, that for a common disease it furnishes a common cause. But we should expect certain other peculiarities to obtain :—

(*a*) We should expect that that part of the stomach where the gastric juice is alkaline at the moment of its secretion would be the part which would be least protected from invasion by micro-organisms, (as Dr. Sidney Martin has pointed out [1]), and therefore we should expect that the pyloric region of the stomach would be a very common situation for a gastric ulcer.

(*b*) We should expect that the part of the stomach which, being most fixed and uppermost, serves to sling the stomach, (in other words, the neighbourhood of the lesser curvature, the part most often out of contact with its acid contents), would suffer more than those parts which are almost continually bathed with acid.

(*c*) We should expect that the parts of this upper portion most remote of all from the gastric juice would be the seat of election of *perforating* ulcers; *i.e.*, that perforating gastric ulcers should be commoner near the cardiac orifice, and, inasmuch as a considerable portion of the twenty-four hours is spent in a recumbent position, they should be also commoner on the front than on the back of the stomach.

(*d*) We should expect, further, that if an open ulcer existed on one wall of the stomach, a second should sometimes form on the opposite wall, where the two walls occasionally came in contact and rubbed on one another.

[1] *Op. cit.*, p. 419.

(*e*) And if one of these two ulcers perforated, we should again expect that, although they would both owe their origin to the same microbe, the anterior ulcer would be the ulcer to give way.

(*f*) We should expect the typical progressive chronic ulcer to be most frequent on the posterior wall of the stomach.

(*g*) We should expect on microscopic section of the edges of an ulcer to find evidence of inflammation, less in the acute, more in the chronic; and certainly we should expect some evidence of microbes in the tissues, microbes growing amongst inflammatory products a little way from the edge, or enclosed in phagocytes in the neighbourhood of the lesion. (Microbes in the floors and edges or sloughs of the ulcers would count for nothing; such might well represent an invasion after the event).

Let us see how far these expected peculiarities are actually found to exist.

(*a*) The pyloric end of the stomach is the commonest seat of gastric ulcer. About 75 per cent. of the ulcers are found there.

(*b*) The neighbourhood of the lesser curvature suffers far more than that of the greater curvature, whilst ulcer of the fundus is very uncommon.

(*c*) Perforating ulcer is much more common on the anterior surface than on the posterior. Brinton found that 70 per cent. of all perforations were on the anterior surface of the stomach. In 111 cases I have collected from the journals (almost all, however, operation cases), in which it is stated that the ulcer was anterior or posterior, 90 or 81 per cent. were on the anterior surface, and 21 or 19 per cent. were on the posterior surface. Again, in 75 of these 111 the position was stated sufficiently clearly to divide the ulcers into those near the cardiac end, those near the pyloric end, and those occupying an intermediate position. Of anterior ulcers, 26 were cardiac and 19 pyloric; and of posterior ulcers 8 were cardiac and 2 pyloric. Thus the neighbourhood of the cardiac orifice

and the anterior surface are the commonest seats of the perforating ulcer. Here, however, one must deal in passing with the received explanation of the frequency of anterior perforations. It is said that their greater frequency is due to the greater mobility of the anterior surface, which prevents the formation of adhesions. It seems to me that this reason is unsatisfactory. First, it is by no means certain that the posterior wall of the stomach is so much less mobile than the anterior, for during most of the twenty-four hours the anterior and posterior walls must be equally apt to glide over neighbouring structures, the patient being upright, and most perforations occur when the patient is in an upright position. Secondly, anterior adhesions do form, and not very infrequently. Amongst the 90 cases of *perforating* anterior ulcer, I have found definite mention of adhesions (generally firm adhesions) in 12.

(*d*) The occurrence of two ulcers exactly opposite to each other on the stomach walls is strikingly common. Brinton found amongst 191 cases 24 instances of such opposite ulcers.

(*e*) Sometimes both perforate, but when only one does so, it appears to be always the front one. In Brinton's series there was no exception to this.[1]

(*f*) The typical chronic ulcer is much more common on the posterior than on the anterior wall—as 46 to 7 in Fenwick's recent table.[2]

It will be observed that these peculiarities, which we expect to find on an hypothesis of a microbic origin of gastric ulcer, and actually do find, are the very peculiarities which on other hypotheses have always puzzled us to explain.

(*g*) With regard to the last point, I speak with hesitation. It would be foolish to try to found a theory on a single specimen. But, for what they are worth, I submit some particulars of a perforating gastric ulcer:—Sections of its edge were cut in the expectation of finding evidence of microbic invasion. These sections were stained with

[1] Wilson Fox, *Diseases of the Stomach*, 1872, p. 156. [2] *Op. cit.*, p. 8.

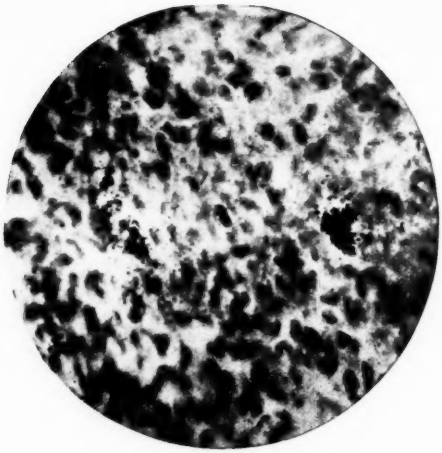


FIG 1.

Cluster of Micrococci and Scattered Micrococci amongst inflammatory cells, one-eighth of an inch from the edge of the ulcer.

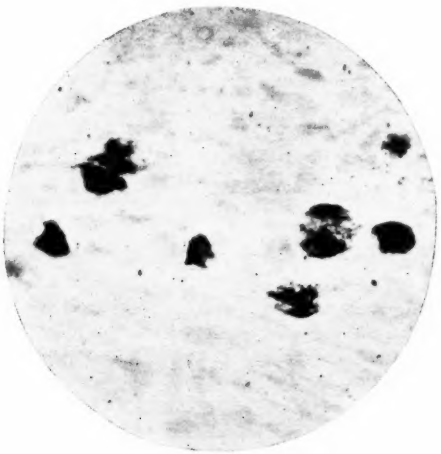


FIG 2.

A few of a Chain of Cells, packed with Micrococci, reaching backwards from the zone of inflammation. Some of these cells have ruptured, probably when the section was cut.

methylene blue, decolourised in slightly acidulated water, dehydrated and mounted in balsam. They showed, close to the digested margin of the perforation, abundant evidence of acute inflammation, abundant migrated leucocytes. About one-eighth of an inch from the margin, just about the middle of the zone of infiltration, clusters of micrococci were found fairly numerous. Some of these are shown in photomicrograph 1. Further from the ulcer, about half an inch from its edge, there was very little leucocytic infiltration, but chains of large cells crammed with cocci could be seen, apparently travelling back from the inflammatory focus along the lymph-paths of the tissues. Some of these are shown in photomicrograph 2. There were no other micro-organisms to be seen within or behind the inflammatory zone. The specimen from which the sections were cut had been some time in spirit, and showed no evidence to the naked eye of inflammatory swelling. One would have chosen it as a typical, acute, punched-out, perforating gastric ulcer. If we assume that these microbes were merely taken up from the raw surface of the ulcer, this difficulty arises, "Why were they all of one sort?"

To my mind the inference seems almost unavoidable, that, in this ulcer, one had to do with the effect of an invasion of the stomach wall by the staphylococcus one found there, and that the process had taken place in the way I have suggested.

At any rate, considering how unsatisfactory are the existing theories, how few of the cases they can collectively account for; how reasonable seems the supposition that gastric ulceration, like other ulcerations, is primarily an inflammatory process; how plausibly, at all events, the peculiarities of the gastric juice will explain the peculiar features of the ulcers, whether acute or chronic; how reasonably we can pass from the supposition that gastric ulcers are inflammatory, to the further supposition that they may be caused by micro-organisms, one cannot but think that even a single case, such as that I have ventured to bring forward, possesses more than a passing interest.

My best thanks are due to my friend, Dr. Norman, for placing at my disposal his incomparable skill as a photo-micrographer. I only regret the imperfections of the specimen which I had to submit to him.

CASE OF ABSCESS IN THE LEFT LATERAL LOBE OF THE CEREBELLUM, SUCCESSFULLY EVACUATED:

WITH SOME REMARKS ON THE METHOD OF OPERATION EMPLOYED.

BY

J. MICHELL CLARKE, M.A., M.D. Cantab., F.R.C.P. Lond.,
Physician to the Bristol General Hospital,

AND C. A. MORTON, F.R.C.S.,
Surgeon to the Bristol General Hospital.

IN view of the infrequency of recovery from cerebellar abscess, the following case is of interest; the clinical symptoms closely corresponded with those given by Dr. Acland and Mr. Ballance in their paper[1]:—

ACCOUNT OF THE CASE BY DR. MICHELL CLARKE.

The patient was a girl, æt. 13, who had never had any serious illness before the present one, and had always been bright and intelligent. Her father died of consumption, but otherwise the family was a healthy one.

The illness began with nasal catarrh, followed by a discharge from the left ear, four months previously; it was not painful, and appeared for a few days, and then passed off to reappear in a day or two. About one month previous to this she was stated to have had a "cast in her eyes," which gradually increased. The mother stated that three months previously she was brought home from school on a Thursday with pains in her forehead, mostly on the right side, and vomiting, and went to bed; on the Monday week she became unconscious,

[1] *St. Thomas's Hosp. Rep.*, 1896., xxiii. 133.

and remained so until Wednesday, when her ear "went pop," and this was followed by a large amount of discharge. The squint then disappeared, and has not been noticed since. On the Monday she began to suffer from fits. The fits were preceded by a feeling of chilliness; her face became red, she screamed out; her knees were drawn up to her chin, her arms were extended over the head and the hands clenched; all the limbs were rigid, and the body bent towards the right side. She did not bite her tongue, but passed water during the fits, and as she came round she nearly always said, "Oh, my poor head." The fits last from two to three minutes; she has had as many as seven in succession. Ever since this attack she has suffered from these fits frequently, from continuous headache, and from one or two attacks of vomiting daily, and was continually crying out with the pain in her head.

She was admitted on April 4th; her temperature was 97°, and pulse 84. On April 5th she was examined carefully; she was extremely emaciated, and very slightly deaf in the left ear, from which there was a slight discharge. She answered slowly and deliberately to questions, after pausing a while; but her answers were quite sensible and intelligent, and she spoke clearly and well. She very distinctly indicated the right frontal region as the seat of pain. She was lying on her right side, the right hand under the head, the right arm flexed, the left arm across the body, and the legs curled up on the trunk. To this position she returned when disturbed. Temperature, 97°; pulse, 84, feeble, regular; respiration, 20, easy; retention of urine and fæces; she had vomited three times since admission; she had had no fits and no rigors. She occasionally called out, "Oh, my head."

There was no squint, the eyes deviated slightly to the right; there was nystagmus when the eyes moved into either canthus, the largest excursions being to the left. The pupils were of normal size, equal, and acted well. The left palpebral fissure was a little larger than the right. Double optic neuritis, most marked on right side.

The tongue was thickly furred; she put it out straight. There was no difficulty in swallowing. The grasp of the right

hand was fair, though weak; that of the left hand was very weak and feeble. There was some oscillatory tremor on movement of the left arm and hand, but she could raise it above her head.

She could not stand, and when placed on her legs fell to the right; this was tried twice. The muscles of both arms and legs were much wasted. Sensation was everywhere normal to touch and pain.

Abdominal and plantar reflexes normal (flexion of toes in latter); knee-jerks present, left perhaps slightly the greater, they were not exaggerated, and there was no clonus and no muscular rigidity.

Lying down she could move both legs, and lift either of them off the bed. Kernig's sign was not present. She resented the bed-clothes being pulled off, and wished to be covered up again, otherwise she lay passive during examination. Vomiting ceased after she was put on peptonised milk and beef-tea. The symptoms remained the same until the operation.

The general signs of intracranial abscess were thus present—namely, subnormal temperature, headache, optic neuritis, convulsions, slow cerebration, and constant vomiting.

The localising signs were: the position in bed, the marked paresis and tremor of left arm (same side), the direction of the eyes to the opposite side and nystagmoid jerkings, the weakness of both legs and tendency to fall to the right (opposite side), the headache being so distinctly on the right (opposite) side of the forehead, perhaps the greater intensity of optic neuritis on the right side, all indicating a lesion in the left lateral lobe of the cerebellum; the fact that the discharge came from the left ear was also in favour of this; and the absence of anæsthesia, of hemiplegia or of hemiplegic distribution of paresis, of paralysis of the third nerve, and of aphasia showed that the temporo-sphenoidal lobe was not involved.

A further special point in the case was the total cessation of vomiting when the patient was placed on peptonised milk and beef-tea; this in the presence of a large, probably actively extending abscess, is unusual, and might have been misleading

if the other signs had not been distinct. I accordingly asked Mr. Morton to see the patient with a view to operation.

ACCOUNT OF THE OPERATION AND AFTER PROGRESS OF THE CASE, WITH REMARKS ON THE METHOD OF EXPLORATION EMPLOYED, BY MR. MORTON.

On April 6th I explored the left side of the cerebellum by Dean's method. A small flap was turned down behind the left ear, and the skull in the region of the lateral sinus removed with a $\frac{3}{4}$-inch trephine and Hoffmann's forceps. A small area of the dura mater of the cerebellar fossa just below the lateral sinus was then opened, and the cerebellum explored with a cannula and blunt trochar. I first passed the instrument backwards twice with negative result; then towards the middle lobe, also with negative result; but on pushing it forwards, inwards and downwards, I evacuated about two ounces of pus. The track of the cannula was dilated with sinus forceps, but no sloughs came away. A rubber drainage tube was left in the abscess cavity. During the administration of the chloroform before the operation was commenced it was observed that the breathing was extremely slow.

With the exception of some vomiting and headache on the 12th, she had no cerebral symptoms after the operation. The pulse the day after was 80, and on the day following 90, and R. 16, whereas the pulse the afternoon before operation was 64. There was no pyrexia after operation. The drainage tube was left out five weeks after operation, and a week later the patient was discharged from hospital. On June the 13th the sinus was quite healed. Otorrhœa on the left side was noticed at the time of the operation, and persisted until she left the hospital. On June the 13th it had ceased, and had not returned when seen later.

It will be noticed in reading the record of this case that I explored the brain by Dean's method. I always do so in these cases, for by this method both the temporo-sphenoidal lobe and the cerebellum can be readily explored from the same trephine opening. The disc of bone is removed over the lateral sinus, and then to explore the temporo-sphenoidal lobe the bone is

cut away for a short distance above it, and to explore the cerebellum, below it. Thus the exploration can be carried out on both sides of the tentorium. Dean trephines 1¼ inches behind and quarter of an inch above the centre of the meatus. In order to avoid the ridge of bone which is the continuation of the superior border of the petrous portion of the temporal bone, I prefer always to trephine a little further back and higher up, 1½ inches behind and three-quarters of an inch above the centre of the meatus. I find the presence of this ridge makes it difficult to trephine out the disc of bone at Dean's spot, as the depth of the bone is so unequal over the area trephined. I need hardly point out the great advantage of being able by the same trephine opening to explore the two common situations for brain abscess, from middle-ear disease. In many cases it is quite impossible to be sure in which the abscess lies, and failure to find pus in one situation has often prevented a further exploration of others on the ground that the patient was not in a condition for a more prolonged search by another incision and trephining, and thus the abscess has been missed.

Another method of exploration which I used in this case, and have always used in such cases, is the exploration of the brain by means of the cannula of an aspirator containing the blunt clearer supplied with it. This blunt instrument is pushed through the cerebral tissue to the depth it is intended to explore. The blunt trochar is then withdrawn, and if pus is present it will flow out, or if in withdrawing the cannula it passes through pus the latter will flow out. If a hollow needle or an empty cannula is thrust into the brain it tends to become blocked with brain tissue, and then even if it enters a collection of pus, the pus will not flow out. Macewen pointed this out in his book on *Pyogenic Diseases of the Brain.* I use a blunt trochar rather than a sharp one, as with it we could have no difficulty in penetrating brain tissue, even when surrounding an abscess cavity, and it should not penetrate any large cerebral vessel it might come in contact with. The result of the exploration in this case shows the need for repeated puncture. It was not until the fifth puncture that pus was evacuated.

Dr. Shaw's Case of Muscular Atrophy due to Lead.

A CASE OF MUSCULAR ATROPHY DUE TO LEAD.

BY

J. E. SHAW, M.B.,

Physician to the Bristol Royal Infirmary; Professor of Medicine, University College, Bristol.

J. A., æt. 42 years, farm labourer, was admitted to the Bristol Royal Infirmary on March 1st, 1901, complaining of weakness in his arms and legs. He stated that for about six weeks past he had noticed an increasing weakness in his hands and fore-arms, with pains about his shoulder-joints; these pains, he thought, were "rheumatic," and were the cause of his inability to move his shoulders. During this same time he had several attacks of colic, with constipation. He had been losing strength in his legs three or four weeks. He is accustomed to drink a good deal of cider.

Condition on Admission.—Looks in fair general health and nutrition. Arteries manifest decided sclerosis, with pulse of high tension; marked blue line on gums, tongue coated, bowels constipated, abdomen flat, liver not appreciably enlarged. Urine contains decided trace of albumen, but is not of abnormally low specific gravity.

Nervous System: On Left Side.—As will be seen in the plate, the deltoid, supra-spinatus, and infra-spinatus are almost completely atrophied. The portion of the trapezius attached to the clavicle (*ultimum moriens*) is in good development, the rest of the muscle having completely atrophied; the subscapularis is nearly all gone, and the latissimus dorsi weakened, though not completely paralysed. The clavicular fibres of the pectoralis major are quite wasted. The biceps and brachialis anticus are very much wasted, the residuum being toneless and flabby, so also is the supinator longus; the triceps, on the other hand, has quite escaped implication, and is of full size and possibly of full power. The muscles of the fore-arm present the condition usual in lead paralysis. The thenar and hypothenar muscles are much wasted, but not completely paralysed; the fingers cannot be flexed at the metacarpo-phalangeal joints by means of the interossei, which are wasted, and the lumbricales do not appear to have any power; the defective power of flexion and extension of the fingers, and perhaps also of abduction and adduction, may be increased by the state of the fore-arm muscles. Of the wasted muscles the mechanical irritability is much increased and "tendon reflexes" not obtainable. No response to faradic current can be obtained in the deltoid, biceps, supra- and infra-spinati, and supinator longus; the portion of the trapezius which remains responds readily, as does the triceps; the fore-arm extensors act very slightly, the flexors more readily. Some of the muscles, especially the infra-spinatus, are very tender on pressure; but no skin-anæsthesia or other sensory change is discoverable. Patient has no voluntary motor power over the shoulder-joint; possesses fair power of extension, but none of flexion, in the elbow-joint; none of extension, pronation, or supination at the wrist-joint; no power of extension of fingers, and marked loss of power in the proper muscles of the hand, as already noted.

On Right Side there is a general correspondence in condition, but to a lesser degree. The supra- and infra-spinati are rather wasted, the deltoid and clavicular fibres of the pectoralis major being of normal size apparently, though not of normal power; the biceps is of full volume, but decidedly flabby in tone, and the mechanical irritability much increased. The subscapularis is in better nutrition than upon the left side, and the latissimus dorsi apparently quite normal. The fore-arm muscles are much as upon the other side, but not quite so much affected. The thenar and hypothenar eminences are rather more affected than those of the left hand, the interossei apparently less so. To the faradic current the right supra- and infra-spinati are nearly as defective as those on the left side; but the deltoid, biceps and supinator longus give response to a strong current. Muscular hyperalgesia is most marked in the scapular muscles. There is apparently some general loss of electro-sensibility in affected areas, as the patient is not incommoded by a strong current applied to shoulders and upper arms. He is able to abduct slightly the arm from the side and raise the arm into the horizontal front position; he can also flex the elbow, but with less than normal power, though the biceps is not diminished in volume. The power of the fore-arm muscles is rather greater than upon the other side; in the hand he can abduct the fore-finger distinctly, and can oppose the tip of the thumb to the tip of the forefinger.

No affection of any muscle of face, eyes, lips, tongue, or palate. There is a general weakness of the legs, but no distinct paralysis or atrophy of any muscle in particular. No affection of the sphincters.

These cases of extensive muscular wasting and paralysis due to lead are well recognised, and are described in authoritative treatises, such as those by Oliver [1] and Gowers. [2] Dr. Shingleton Smith recorded a case resembling this one in some respects in *International Clinics* (6th series, vol. iii., p. 169); and quite recently Dr. D. J. McCarthy, in the *Philadelphia Medical Journal* (March 23rd, 1901, p. 574), describes a case due to lead and alcohol combined. Still, in this part of England we seldom see them.

It is clear that this clinical group of cases, though bearing a close external resemblance to one another in the affection of the shoulder group of muscles, are not all of the same fundamental pathology. In this particular case the rapid wasting, the marked loss of response to faradism, and the weakness of unatrophied muscles indicate a lesion in nerves rather than one located in the anterior cornua. Fibrillation also was non-existent; but no reliance must be placed upon the absence of that sign, significant as its presence often is.

[1] *Clifford Allbutt's System of Medicine*, vol. ii., 1897.

[2] *Diseases of the Nervous System*, vol. ii., 2nd ed., 1893, p. 950.

When last seen the patient had made considerable improvement in the power of the legs and fore-arms, and some improvement in the nutrition and power of the proper muscles of the hands; but many months, if not years, would be necessary, under the most favourable circumstances, for the restoration of the shoulder-girdle muscles.

A CASE OF ARTIFICIAL ANUS FOLLOWING HERNIOTOMY.[1]

BY

A. W. PRICHARD,

Senior Surgeon to the Bristol Royal Infirmary.

THE following is an account of the difficulties I had in a case of strangulated hernia, and the various methods that were adopted to cure the artificial anus that necessarily resulted from the herniotomy:—

On November 24th, 1900, a woman came under my care at the Infirmary with right femoral hernia that had been strangulated for a week. She had had much poulticing and much taxis, and the symptoms of obstruction were complete. The skin was red and œdematous all round the tumour, and her general condition was grave in the extreme.

On cutting through the skin, fæcal matter exuded in more than one place, and the intestine was found to be sloughy and quite adherent at the stricture, and the patient was too bad to undergo a prolonged operation. I divided the stricture and packed it with gauze, and opened the knuckle of intestine freely.

A fortnight later sloughs and suppuration had disappeared, and the two ends of bowel were evident in the groin, surrounded by much soreness from the acrid nature of the fæcal discharge. To try and remedy this and to keep the patient nourished, the opening in the bowel being not very far from the pylorus, I introduced a glass tube bent upon itself, the ends encased in india-rubber tubing, and it was curious to see the contents of the alimentary canal passing through the tube. This did not prevent leakage, and I could not press it down enough so as to effectually alter the spur.

On December 18th I made an attempt to close the anus by an extra-peritoneal operation, but abandoned it, as I could not get enough

[1] Read before the Bristol Medico-Chirurgical Society, March 13th, 1901.

tissue free to bring across the large opening, and because the sac on the outer side was apparently incorporated with the femoral vein.

On January 15th, after due deliberation, I short-circuited the gut by establishing a lateral anastomosis after Halsted's method between the two pieces of intestine that were fixed in the groin. The abdomen was opened in the middle line, and the two columns of intestine being recognised, by the help of a colleague's fingers passed through the artificial anus, I drew the part wanted out through the wound and sutured them together by continuous silk suture. A row of Halsted's sutures were then passed, but not drawn together till after the apertures in the adjacent side of the gut were made. I made these and seamed together the mucous and peritoneal coats, which effectually stopped bleeding and rendered the apposition easy. The extremities were strengthened by a few more Halsted's sutures. I did nothing to the part of the gut between the anastomosis and the artificial anus. The result at first was most encouraging, the bowels acting in the ordinary way and the amount coming from the artificial anus proportionately diminishing. I left matters alone, thinking that the herniated part might shrink; but, instead of that, the anastomosis in a short time did not work properly, and in three weeks' time closed up so that I could get no communication between the columns on testing by injections of coloured solutions.

I now fell back upon my *dernier ressort*—a plan I wished to try before the lateral anastomosis, only my colleagues persuaded me otherwise—that was the use of Dupuytren's enterotome. I passed the two blades up to the hilt, locked them and screwed them up, and the second day screwed them nearly as far as it was possible. The two blades seemed to be nearly in contact on the fifth day, the outside part being screwed as tightly as possible; but it was not till the twelfth day that the instrument fell out, my forefinger passing through the cleft with the greatest ease. There had been no pain or discomfort from the wearing of the instrument. Three days after the enterotome came away, I closed the anus in the following manner:—Much of the exuberant mucous and sub-mucous coats was cut off. Then the outer coats were dissected from the skin tissues until there was sufficient to meet in the middle line, a small line of neighbouring skin being included. The mucous coat that was left was then stitched together in the middle line by catgut, forming a mucous roof to the new canal. The muscular and serous coats were sutured over the mucous roof by Halsted's silk sutures, and then the skin, the subcutaneous areolar tissue having been freed, was slid from each side and sewn together in the middle by a row of silkworm gut stitches. An iodoform gauze plug was left in at each end for drainage.

This was done on the 4th of March, and the result has been good. Glycerine enemata from three days after the operation brought about a natural result, and the whole of the wound healed. A stitch abscess formed, discharging some fœtid pus; but the patient is now practically well.

A RETROSPECT OF A THIRD SERIES OF FIFTY CONSECUTIVE INTRA-ABDOMINAL OPERATIONS.

BY

JAMES SWAIN, M.S., M.D. Lond., F.R.C.S. Eng.,

Professor of Surgery at University College, Bristol;
Assistant-Surgeon to the Bristol Royal Infirmary.

(Continued from page 29.)

F.—**Operations upon the Stomach.**—CASES 9 and 24.

Gastrorraphy for perforating **gastric ulcer** is most successful when performed within twelve hours of the perforation. After this period the mortality rapidly increases, so that it is highly desirable to proceed to operation as soon after the diagnosis is made as possible. In Case 9 operation was not performed till about forty-five hours after perforation, by which time a general septic peritonitis had occurred.

Benign tumours of the pylorus have not received much attention, partly because of their rarity, and partly because the pyloric obstruction which they cause is accompanied by symptoms resembling those produced by malignant neoplasms.

Benign tumours of the pylorus are associated with a degree of mobility which is more commonly found in new growths of the small intestine or omentum; and the lesson to be learnt from the following remarkable case, which I have described more fully elsewhere,[1] is that an innocent tumour of the pylorus should be suspected when there is a freely movable swelling in the epigastrium, with symptoms of pyloric stenosis and gastrectasis in a young adult.

CASE 24.—**Intra-pyloric Fibroma—Pylorectomy.**—The patient had suffered from attacks of indigestion, shown by vomiting and pain in the epigastrium after meals, since she was fifteen or sixteen years of age. Eight years ago she had "ulcer of the stomach" and passed black motions, though there was no hæmatemesis. About a month before I saw her she suffered from flatulence and unpleasant eructa-

[1] *Westminster Hosp. Rep.*, 1901, xii. 109.

tions, and noticed a hard lump in the abdomen about the size of a hen's egg. There was no pain, but she wasted rapidly and felt ill. For the past fortnight there had been attacks of vomiting. Emaciation was marked. Situated in the right umbilical region was a slight bulging caused by a firm, irregularly-shaped tumour nearly as large as the closed fist and having a nodular surface. Though usually situated just to the right of the umbilicus, the tumour was occasionally found in a different position (close under the right costal margin, &c.), and could be easily moved completely to the left of the umbilicus. With respiration the tumour moved downwards some two inches, and could be similarly displaced by manipulation, but its downward displacement seemed to be limited by some attachment above. There was resonance over the tumour, and gurgling could be felt by the hand and heard with the stethoscope, though by auscultatory percussion no definite connection between the tumour and the stomach could be made out. The vomit gave a negative reaction to Günzburg's reagent. A four-inch incision was made in the median line, about two-thirds of it being above and one-third below the umbilicus. Part of the stomach and duodenum were delivered through the parietal wound, and an incision made in the anterior wall of the stomach. The tumour was then found to be attached to the posterior part of the pylorus by a thick pedicle about one and a half inches in diameter, and the body of the tumour hung down in the stomach in front of the pylorus and evidently acted like a ball valve. The weight of the tumour had caused invagination of the adjacent parts of the stomach and duodenum. The stomach was dilated and contained a dark brownish-black fluid. By prolonging the incision in the anterior part of the stomach the growth was encircled, and then entirely removed with the adjacent parts of the stomach and duodenum. A cicatrised ulcer was seen on a small part of the pylorus, which was not excised. The duodenum was attached to the stomach by a double row of stitches and the abdomen closed without drainage. The patient only vomited about a drachm of watery fluid after operation. Nutrient enemata formed the sole support until the third day after operation, when feeding with peptonised milk and water gruel was commenced. The diet was gradually improved: bread and butter was allowed on the sixth and fish on the ninth day after operation. The patient got up about three weeks, and went home at the end of a month, after operation.

Examination of Tumour.—The portion removed weighed $4\frac{3}{4}$ ounces. The tumour sprang from a portion of the pylorus, and the adjacent parts of the stomach and duodenum had been drawn inwards by its weight, so that there was a cone-shaped recess covered by peritoneum at the base of the tumour. The tumour itself had an irregular shape and surface, and measured about $3\frac{1}{2}'' \times 2\frac{1}{2}'' \times 2''$ (Fig. 2). It was covered with reddish-grey mucous membrane, but the mucous membrane of the invaginated parts of the stomach and duodenum around its base was congested and of a purplish-red colour. It cut with a firm section, and the internal aspect was smooth and of a rather translucent and almost white colour. Microscopical examination showed it to be composed of bundles of fibrous tissue with loose cellular tissue (Fig. 3), but here and there it had a myxomatous appearance. The mucous membrane covering it was lined with columnar epithelium. I am indebted to Mr. James Taylor for the photo-micrograph and to Mr. Clayton for the photograph of the specimen itself.

FIG. 2.—*Anterior Aspect of Tumour.*

FIG. 3.—*Microscopical Section of Tumour.*

G.—**Operations for Diseases of the Intestines.**—CASES 1, 4, 7, 20, 25, 29, 34, 39, and 41.

These may be divided into—

Colostomy.—CASES 1, 7, 29, and 34.
Colectomy.—CASE 39.
Operation for Volvulus.—CASE 4.
Enterorraphy.—CASES 20 and 25.
Operation for Perforation by Foreign Body.—CASE 41.

All the cases of **colostomy** were performed for advanced malignant disease which did not admit of removal. Perhaps the insidious onset of malignant disease of the intestines is largely to blame for the comparative rarity of a sufficiently early operation to allow of a radical cure. But even if the time for excision is allowed to go by, it seems inexcusable that fæcal vomiting should be permitted to occur before relief is sought by colostomy—and this is by no means uncommon. To be successful, the operation should be performed before the patient is exhausted by the absorption of toxic products from his own intestines, so that the gut need not be opened at the time it is brought to the surface. When this obtains, colostomy is almost devoid of danger.

In the performance of the operation the muscles should be separated bluntly, and not cut. In this way I have frequently obtained a certain amount of sphincteric action around the artificial anus which is most helpful in the retention of the fæces, so that in some cases a motion occurs once daily without any leakage in the interval.

One of the most life-saving suggestions of Greig Smith was the performance of **enterectomy,** when intestinal obstruction is present, in three stages: firstly, fixation of the growth outside the body, and the immediate establishment of intestinal drainage; secondly, resection of the growth about ten days after; and, thirdly, closure of the artificial anus at a still later date. For some time past I have merged these last two stages into one, the ends of the divided intestine being approximated immediately after the growth is excised. This is a saving of time, and the operation is easier than in three stages, because

the calibre of the two portions of the gut is less unequal and there is no marked "spur" to contend with.

Recovery after operation for intestinal obstruction at the age of 78 years is extremely rare, and it is even more uncommon for that recovery to be associated with the removal of a malignant growth by **colectomy** (Case 39).

CASE 39.—**Malignant Stenosis of the Descending Colon—Colectomy.**—The patient had had several attacks of obstruction during the preceding twelve months. For ten days before operation there had been symptoms of incomplete obstruction with vomiting, and for twenty-four hours before operation there was complete obstruction with gradually increasing abdominal distension, pain, and vomiting. A coil of the descending colon with the malignant growth at the apex was fixed over a glass rod outside an oblique incision in the left flank, and a medium-sized Paul's tube was placed in the upper end of the loop, by which a pint of liquid fæces and much flatus soon came away. The Paul's tube was cut away on the third day, and the patient allowed to get up on the tenth day after operation. On the seventeenth day after operation the colon was completely cut across above and below the growth, and the latter thereby freely excised. The two ends of the gut were then immediately united by a double layer of sutures. A fæcal fistula formed, and an unsuccessful attempt was made to close it. This still persists, as the advanced age (78 years) of the patient renders further operation undesirable. The portion of gut removed was about three inches long on the convex surface. The growth—which was a columnar epithelioma—occupied about one and a half inches of the whole circumference of the gut, and had almost completely obliterated the lumen.

It is not often a patient is subjected to two operations for intestinal obstruction. The following case of **volvulus** is interesting because it shows what good union may be effected by the Murphy button, an instrument which for several reasons I do not use if intestinal anastomosis can be safely effected by immediate suture.

CASE 4.—**Volvulus from Adhesions after the Use of the Murphy Button.**—Six years ago the patient had suffered from a strangulated femoral hernia, resulting in gangrene of the gut. Enterectomy was then performed, and the two ends of the gut were approximated by a Murphy button, the operation being carried out through a median incision. At the time of the second operation the patient was suffering from acute intestinal obstruction. On cutting through the cicatrix between the umbilicus and pubes the underlying bowel was wounded, because it was firmly adherent to the cicatrix. The peritoneal cavity was therefore entered above the cicatrix, and it was then found that a portion of ileum was adherent along the whole length of the cicatrix over a linear distance of about two and a half inches. On these adhesions as an axis the bowel had become twisted, so that the proximal and distal portions strangled each other. The intestine above the seat of volvulus was distended; below it was contracted. The gut

was freed from adhesions and untwisted. After allowing the intestine to empty itself through the hole which had been accidentally made, the aperture was closed with Lembert sutures. The parietal wound was closed without drainage. The bowels acted during the same night, and the patient made an uninterrupted recovery. The cicatrix in the bowel where the Murphy button had been used and the part where the mesentery had been sewn were rather whiter than normal. The line of union of the gut was quite firm, and there was practically no narrowing of the lumen.

The following case puzzled me greatly. Whether it began as a burst tubo-ovarian abscess, which subsequently discharged into the jejunum, or whether the jejunal perforation was the primary lesion, I am quite unable to tell. In any event, recovery after operation for **jejunal fistula** is sufficiently rare to justify an account of the facts:—

CASE 20.—**Jejunal Fistula—Enterorraphy.**—The patient had had seven confinements, the last being three weeks before she came under my observation. During the last pregnancy the abdomen was said to have been more distended than usual, and the distension, instead of diminishing after labour, gradually increased and the bowels became very tender. When first seen the abdomen was as large as at a full-term pregnancy, and appeared to be occupied by a cystic swelling in the lower part. There was slight fever, and the general condition was one of some gravity. A median incision was made between the umbilicus and pubes, and a cavity opened containing six pints of a dark reddish offensive fluid. The wall of the cavity appeared like the inside of an universally adherent cyst, and the general peritoneal cavity was entirely shut off. Two large drainage tubes four inches long were placed in the wound, which continued to discharge a considerable amount of offensive fluid. Five days later the discharge was found to be acid in reaction, and contained bile acids and crystals like uric acid and sodium glycocholate, but no mineral acid. This caused an extensive redness and excoriation of the skin of the abdomen around the wound, exactly as sometimes occurs in the neighbourhood of a gastric fistula. Grape-stones, portions of orange and other indigestable articles of diet, began to be discharged through the wound, but the cavity gradually contracted down to a small fistula, which finally closed about seven weeks after operation. This closure was, however, only temporary, for directly the discharge ceased the temperature rose, and the wound again began to discharge nine days later. This discharge was more green than before, and its persistence from the fistulous opening led to the second operation, about nine weeks after the first operation. The fistulous opening (one and a-half inches below the umbilicus) in the parietes was slit up, and an incision about eight inches long was made from a point three inches above the umbilicus downwards towards the pubes. There was much matting of the intestines and omentum in the neighbourhood of the fistula, but the mass was gradually unravelled to allow of evisceration. A careful search for the fistula was made in the stomach and duodenum because of the acid character of the discharge, but no evidence of ulcer was found. A perforation the size of a large quill was afterwards discovered in the upper jejunum (?), which was adherent to the right side of the incision in the parietes. Considerable matting was found in the neigh

bourhood of the left ovary, and the peritoneum generally was much thickened. The perforation in the intestine was sutured with Halsted's stitches, the abdominal contents which had been turned out were returned, and a large tube was placed across the abdominal cavity—one end emerging at the mid-line and another at a counter opening in the right flank. A second tube was placed in Douglas's pouch. Convalescence was protracted, but the patient made a good recovery.

In cases of **abdominal contusion** it is not always easy to say whether there is a visceral injury or not. In most instances in which the shock is prolonged, cœliotomy is called for. For the diagnosis and treatment of these injuries, I would refer to my article in the *Encyclopædia Medica*[1]. In the following case the typical symptoms of marked shock, accompanied by evidence of free gas in the peritoneal cavity and persistent vomiting, led to a correct diagnosis of ruptured intestine.

CASE 25.—**Rupture of Small Intestine—Enterorraphy.**—The patient was thrown from his bicycle, and was supposed to have been struck in the abdomen by the shaft of a carriage. He complained of great abdominal pain. Vomiting set in an hour after the accident and persisted, and the shock gradually became more marked. At the time of examination he was very pale and restless, and complained of intense pain in the abdomen below and to the left of the umbilicus and in each supra-clavicular fossa. Pulse 140 per minute, small and compressible; respiration almost entirely thoracic; abdomen rigid and not distended. There was resonance all over the usual area of liver dulness. After a hypodermic injection of strychnine and a rectal injection of brandy the abdomen was opened, nineteen hours after the accident, above the umbilicus. On incising the peritoneum free gas escaped, followed by a large quantity of dark liquid blood and clots, and large clots were scooped out by the hand. The omentum and some coils of intestine were bruised and congested. A portion of gut, which was probably the upper jejunum, had a large rent on the convex border, the hole being as large as a penny-piece and the edges being ragged, bruised and bleeding. The aperture in the gut was quickly closed by a series of Halsted's quilt sutures placed longitudinally to the gut, so that the line of union would be transverse to the long axis of the gut and prevent stenosis. The abdomen was sponged out and a drainage tube inserted before closing the parietal wound. The stomach and liver were uninjured. The condition of the patient was desperate; he rallied at first, but died suddenly soon after operation.

Wonderful recoveries sometimes occur from **perforation of the intestine** by foreign bodies which have been swallowed, but Case 41 shows what serious results may follow the swallowing of a sharp-pointed body like a pin :—

CASE 41.—**Perforation of Intestine by a Pin—Peritonitis.**—Three weeks before I saw him the boy had been to a school treat, and had complained of abdominal pain in the neighbourhood of the cæcum

[1] *Encyclopædia Medica*, vol. i., 1899, p. 5.

ever since. The boy looked very ill; temperature, 100°; pulse, 116°. A large hard mass occupied the right half of the abdomen. An incision into this released some ounces of pus, and deep down towards the pelvis I extracted a common pin (black from decomposition) from the centre of a dense inflammatory mass. The boy never did well, in spite of further operations to ensure thorough drainage. He developed pyæmic symptoms, and a culture from the pus showed a mixed infection of streptococci and B. coli and pyocyaneus (Prof. Kent). Antistreptococcic serum was given in large doses, but the patient is now (about three months after the extraction of the pin) in an apparently dying condition.[1]

H.—**Operations for Appendicitis.**—Cases 2, 3, 8, 11, 15, 23, 26, 28, 37, 38, 40, 42, 44, 46, 47, and 48.

The limitations of space prevent me from dilating upon so interesting a subject as when to operate in appendicitis. I have recently discussed the whole matter somewhat fully by a consideration of fifty consecutive operations for appendicitis.[2] Suffice it to say that the conclusion I have formed is that it is far more rational, and equally safe, to treat each case on its merits, rather than to indulge in such wholesale surgery as would necessarily result from the adoption of any such hard and fast rule as that of operating upon all cases that are not improving in forty-eight hours from the commencement of the attack.

Whenever it is necessary to remove an appendix, I generally prefer to wait until an attack—if it exists—is over, and I have never lost a case which has been operated upon in an "interval." In the above series, I performed **appendicectomy** in Cases 11, 15, 23, 26, 28, 37, 38, 42, 44, 46, 47, and 48 without a single death, but most of them were "interval" cases.

Of the value of **abdomino-vaginal drainage** in cases of extensive pelvic suppuration, whether due to appendicitis or not, I have spoken of in a previous paper; but whether this method of drainage is adopted or not, the head of the bed should be raised in all cases associated with a wide-spread septic peritonitis, for by this means there is a tendency for the inflammation to be confined to the pelvis where its effects, as Dr. Fowler[3]

[1] Death occurred a fortnight after the above account was written. The *post-mortem* examination disclosed extensive actinomycosis, the organism possibly being taken into the system at the time the pin was swallowed.

[2] *Westminster Hosp. Rep.*, 1901, xii. 49—64.

[3] *Med. Rec.*, 1900, lvii. 617.

points out, are less serious than when the upper part of the peritoneal cavity is affected.

The differential **diagnosis** of acute inflammation of the uterine appendages and appendicitis is frequently very difficult, and in a complicated case like the following it is practically impossible to be certain of the primary focus of the disease even after operation:—

CASE 37.—**Salpingo-oöphoritis—Appendicitis.—Salpingo-oöphorectomy—Appendicectomy.**—The patient had had typhoid fever ten months before, and this was followed by an inflammatory attack which was supposed to be due to appendicitis. Since then there had been more or less constant pain in the right side of the abdomen, and three weeks before I saw her she again had symptoms of peritonitis beginning in the right iliac fossa with a temperature of 103°. For the past week the temperature had been normal. Menstruation had been regular and painless. At the time of examination by bi-manual palpation, a swelling was felt in the right iliac region, spreading out half-way along Poupart's ligament from the middle line, and reaching upwards to a point about two-thirds of the distance from the middle of Poupart's ligament to the umbilicus. Pressure over McBurney's spot did not elicit tenderness. The uterus was fixed, and its fundus apparently reached to one and a half inches above the pubes. The right vaginal fornix was depressed by a swelling which appeared to be in the broad ligament close to the uterus, and cystic in nature. The left broad ligament was densely infiltrated, but no fluctuation was present. The patient was put in the Trendelenburg posture, and a median incision four inches long was made between the umbilicus and pubes. All the structures in the pelvis were found to be densely matted. On the right of the uterus (which could not be defined at this stage because of adhesions) was a fluctuating swelling occupying the right broad ligament. Above and to the inner side of this were the cæcum and appendix, densely adherent and the latter bent on itself. The right broad ligament was opened, and an attempt made to enucleate the fluctuating swelling. The bleeding was free, and owing to the density of the adhesion the abscess sac—for such it was—burst, and a fœtid pus escaped. The patient was at once put down from the Trendelenburg posture, and the intestines walled off with iodoform gauze. As pus was escaping, the enucleation was rapidly proceeded with, and a mass the size of an orange was delivered and cut away, after a pedicle composed of part of the Fallopian tube and broad ligament had been tied off. The cæcum and appendix were freed from their remaining adhesions, and then, for the first time, the uterus was definable. The left ovary and tube were embedded in a mass of dense adhesions, and in trying to separate them another abscess cavity was opened in the left broad ligament. This abscess sac was enucleated, and the pedicle formed by the Fallopian tube and ovary tied and cut off, as on the right side; but in so doing there was considerable tearing of the peritoneal surface of the bladder over an area of about two inches by one inch. The appendix (which was thickened and inflamed, and contained fæcal matter) was then removed close to the cæcum, and the stump sequestered. The rent in the peritoneal covering of the bladder was sewn up with interrupted silk sutures, the pelvis sponged out, and gauze and tube drainage placed behind the uterus. The parietal

incision was closed with silkworm gut, and the head of the bed raised to confine the exudation to the pelvis. The gauze and tube were removed on the second day, recovery was rapid and complete, and the patient was able to travel within four weeks of the operation.

A few of the more interesting features of some of the other cases may be briefly stated:—

CASE 2.—Perforation had apparently occurred forty-eight days before operation, and the abdomen contained a large quantity of liquid fæces shut off from the peritoneal cavity. Fæces continued to be discharged through the abdominal wound for more than a fortnight before death occurred.

CASE 8.—There was a large abscess cavity, containing about a pint of fœtid pus, occupying the whole sacral hollow and true pelvis—the uterus and appendages standing out in the middle of the cavity. There were no limiting adhesions. Successful treatment by abdomino-vaginal drainage, but appendicectomy had to be performed subsequently for a recurrence of attacks.

CASE 15.—The inflamed appendix was as large as the thumb, and was with difficulty found in the midst of an extensive fibrinous exudate.

CASE 28.—Resembled Case 37, which has been described at length above. Abscesses existed in connection with the Fallopian tubes, and a double salpingo-oöphorectomy was performed in addition to appendicectomy. Abdomino-vaginal drainage. A fæcal fistula followed.

CASE 38.—There was a gangrenous and perforated appendix, which was removed within twelve hours of the perforation.

J.—**Exploratory Operations.**—CASES 10, 13, 31, 33, 35, 36, and 50.

In the present state of abdominal surgery it is not possible to avoid opening the abdomen for the purpose of making an exact diagnosis of the nature and extent of the disease in a certain number of cases. An exploratory operation is generally a perfectly safe procedure, and it is gratifying therefore to know that no harm was done to any of the patients in whom it was employed.

Cases 33, 35, 36, and 50 were associated with malignant disease, and it is especially in this class of case that it is often impossible to tell whether the affection is capable of removal or not until its extent is made known by means of an explanatory cœliotomy. The regret in most of these cases is that operation was not undertaken at an earlier period of the disease, at a time when surgery holds out a better prospect of cure.

A CASE OF PRESENTATION OF THE AXILLA AT FULL TERM: SPONTANEOUS DELIVERY OF THE FŒTUS.

BY

F. PERCY ELLIOTT, M.B., C.M. (Aberd.),

Medical Officer to the Walthamstow Dispensary.

MRS. H., æt. 35 years, seventh labour. With the exception of the first the presentation at each labour had been abnormal. On the last occasion the presentation was one of shoulder, with prolapsed funis. The membranes ruptured early, and version was performed under chloroform. It was noted then that the pelvis was particularly roomy. Beyond this there was no abnormality made out. The present labour commenced on February 7th, the membranes rupturing at 2 p.m. The patient was seen at 5 p.m. on the same day, at which time the os was not sufficiently dilated to allow of the presentation being diagnosed. Abdominal palpation suggested a transverse presentation. Labour pains did not begin until 2 a.m. on the following day, the liquor amnii escaping freely in the meantime. The patient was seen for the second time at 9 a.m. on this day, when the left axilla was found presenting well into the vagina. The pains being frequent and strong, the presenting part so low down, and bearing in mind the roomy size of the pelvis, it was decided to leave delivery to nature, for a time at any rate.

Shortly after my arrival the left axilla appeared at the vaginal outlet, and following this came the head extended with the occiput lying on the right lumbar region of the fœtus, the left arm displaced dorsally and the right across the neck, the rest of the fœtus coming in the usual way.

The time occupied for delivery of the fœtus after labour pains commenced was only seven hours, while less than half an hour elapsed after the axilla and shoulder appeared at the vaginal outlet. The child, a stillborn one, was very

large, weighing nearly 7 lbs. Its left axilla and that side of the chest was deeply ecchymosed, and the head and neck very livid. No fracture of any bones could be detected.

There was no laceration of any part of the maternal genital tract, and recovery was uninterrupted.

This case, besides recording a rare presentation, is illustrative of the marvellous power of nature in overcoming what would appear an impossible task. The pelvis, it is true, was capacious, but the fœtus also was large.

X-RAY PHOTOGRAPHS AS PICTURES:
WITH TWO DIAGRAMS.

BY

WILLIAM COTTON, M.A., M.D., D.P.H.

BEFORE X-ray photographs can be correctly interpreted it is necessary to settle how far as pictures (or "plane delineations") they agree with, or differ from, ordinary photographs.

In this comparison it is well to keep in mind at the outset that refraction by a lens is not indispensable to the formation of a photographic image. The effective range of fluorescent and actinic X-rays is limited to two or three feet, and for this distance from a camera a "pinhole" in a metal disc does quite as well in ordinary photography as any lens or combination of lenses, so far as pictorial effect and clearness are concerned, provided the exposure is sufficiently prolonged. The focus of a "pinhole" camera is the crossing station for reflected rays; the centre of the anti-cathodal plate of the vacuum tube is a focus of origin, and fairly comparable in size with the other. Nor is there any particular mystery about the use of the camera; some such device would have to be used in X-ray work if more than one source of X-rays were simultaneously in action near the plate.

With ordinary photography, by the crossing at the

"pinhole" of the camera of single rays reflected from each point of an external illuminated body there is formed on the ground glass screen or dry-plate a visible or a latent image respectively. This image is in proper gradation of tone according to the value impressed on each ray at the point of reflection. Viewed from the front of the screen (or from the film side of the developed "negative" as it lay in the camera, according to ordinary practice), the image is found to be inverted, reversed as regards right and left, in perfect perspective, and, as a rule, of smaller dimensions than the object depicted. When the "negative" is turned upside down and looked at through its smooth glass side at a distance from the eye equal to its original distance from the "pinhole"—or the corresponding "print" may be viewed from its face—every part is seen under the same angle as it appears under in the objects pourtrayed, point for point, the same as in an accurate drawing.

With X-rays, by their divergence from the anti-cathodal centre of emission, a visible or a developable image, as the case may be, is thrown on the fluorescent screen or photographic plate of any intervening bodies, in a gradation of tone depending inversely on the hindrance of each ray by the structures in its path. Viewed from the side of the screen or plate nearer to the centre of emission, the image is found to be erect, and with the same order of parts (left to right and right to left) as in the object itself. The same essential rules of perspective hold as in the other case. The image is larger in its parts necessarily than the object, though of course opaque lines X-rayed in contact with the plate are of natural dimension. When the "negative" is held in front of the eye at a distance equal to the original distance from the focus point, and with the film side towards the observer, every part appears under the same angle as it would appear under in the actual object, supposing it were correspondingly visually transparent without refraction.

Many of these points and the modes of reasoning about them are illustrated in the perspective Diagrams I. and II.:—

I. A, B, and C are parallel planes. B is transparent, and

has drawn on it in opaque lines an easily recognisable figure a b c; a b c is copied as a "reflection image" $a^e b^e c^e$ on A in a camera with a "pinhole" at F; a b c can also be copied as a "projection image" (or shadow) $a^x b^x c^x$ on C when F is either an X-ray centre of emission or a small luminous flame. A may be an ordinary screen viewed from the side adjacent to F, or a "negative" looked at from its film side and from the same position. C may be a fluorescent screen viewed from the side nearest F or a developed dry-plate similarly regarded, or it may be an ordinary white screen. Again, if F be the position of a draughtsman's eye looking towards B, then he could draw a picture of a b c on some parallel plane between his eye and B. But before $a^e b^e c^e$ can be got to correspond with a b c we must invert A and look through it from the back (or look at a "print" from it). No such corrections are needed with C, though $a^x b^x c^x$ from the divergent nature of the projection is necessarily larger than a b c.

II. All to the left of the dotted line N indicates the formation of the "reflection image"; all to the right of the dotted line M indicates the formation of a "projection image." A, C, and F are as in I. B is a cube of wire to serve as an object to be taken on A or C. The side of B remote from F is distinctively marked to correspond with a b c in I., and to facilitate comparison of the perspective delineations on A and C. The images on A and C are geometrically similar to each other; but that on A cannot be pictorially compared with B or that on C (owing to the inversion and reversal of that on A) until A has been re-inverted and looked at through the back, or until in the ordinary way a "print" has been taken from it. The "print" from C would correspond with the image on A, barring inversion and size, but be equally fallacious in regard to order of parts.

In actual experimentation with X-rays solid wooden blocks dusted with subnitrate of bismuth are convenient to use instead of skeleton wire figures. The near and far sides from F are distinguished by letters written in an ink impervious to X-rays—*e.g.*, subnitrate of bismuth suspended in gum. Best of all is the hand, with the skin of the palm and fingers

similarly dusted, to bring out the surface contours. A right hand X-rayed from F with palm towards C comes out perspectively on C as a right hand viewed from the back; in a "print" from C it is a left hand viewed from the back—both enlarged. A right hand taken with its dorsum towards C comes out perspectively on C (*i.e*, on the "negative" viewed from its face) as a right hand viewed through the palm, and in the "print" as a left hand viewed through the palm. At least these are what should be looked for in the respective instances, and not any other combinations of side and aspect. And so on, no doubt, with other parts of the body, paradoxical as it may seem to those who are misled by the false analogy between ordinary and X-ray prints.

For some time I have been investigating similar problems (more especially in relation to the stereoscope and the illusion known as "conversion of relief" in X-ray work) with the practical collaboration of Mr. Thomas Clark, and hope some day to lay the results more fully before those interested. I wish in the meantime to place on record the following conclusions:—

(1) An X-ray photograph is pictorially as much a photograph as any other of near objects.

(2) The perspective is the same as in any ordinary drawing, the only difference being that the plane of delineation is on the far side of the object depicted from the eye.

(3) An X-ray "negative" viewed from its face corresponds in order of parts with the object depicted; the "print" therefore, unless viewed in a mirror or rendered transparent and looked at through its back, should be discarded.

(4) As yet the eye (unaided by the stereoscope) does not properly appreciate relief in the single X-ray photograph; nevertheless, that aspect of the object pourtrayed that was actually nearest the X-ray focus at the time of taking, is to be looked for as nearest the eye.

(5) For medico-legal or other precise purposes no single X-ray photograph is of full value unless it has marked on it—

(*a*) Whether it is a "negative" or "print."

(*b*) The part represented.
(*c*) The side of the body—right or left.
(*d*) The part of the region represented nearest the plate.
(*e*) The position of the focus, or anti-cathodal centre of emission, in relation to the plate.

DIAGRAM I.

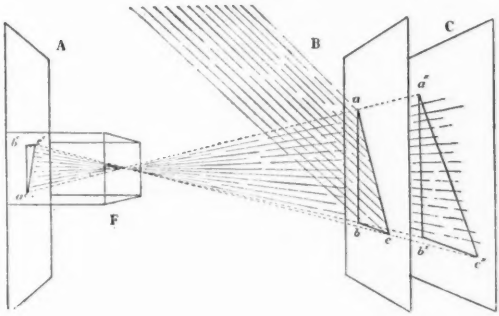
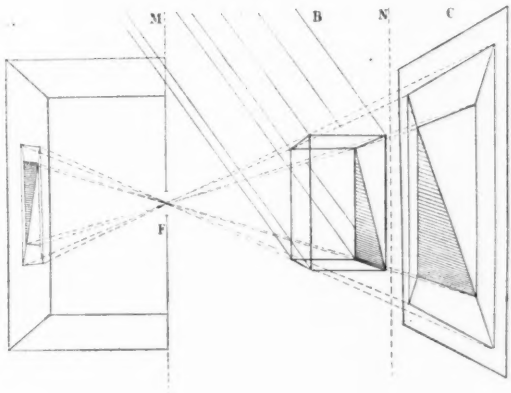


DIAGRAM II.



Progress of the Medical Sciences.

MEDICINE.

The etiology and treatment of **Acute Rheumatism** are subjects of perennial interest, and in which nothing approaching finality has yet been achieved. When we remember what was the usual history of an acute attack some thirty years ago, we may well rejoice that much more can be done to give relief to the patient than was formerly the case. Then the course of the disease was painful and protracted, and fortunate was the patient who, in spite of all treatment, escaped the perils of peri-endocarditis. Now the treatment is almost a matter of routine, and many of our hospital patients are well on the road to convalescence before even the first visit of the physician in charge. Although the treatment has made so good an advance, it is only recently that we have begun to recognise how much the clinical evidence tends in favour of the infectious origin of the disease. It is difficult to grasp the new ideas that such maladies as pneumonia, pulmonary tuberculosis, and acute rheumatism are always due to the presence of a *contagium vivum*, and must therefore be included in the list of contagious diseases. Dr. Cheadle sums up the evidence as regards rheumatism as follows:—

"The occasional epidemic prevalence, the variability of type, the incidence upon the young, the occurrence of tonsillitis, of endocarditis, of pleurisy, of pneumonia, of erythematous eruptions; the rapid anæmia, the tendency to capillary hemorrhage, and albuminuria; the implication of the joints, the relapses, the occasional supervention of hyperpyrexia, the nervous disturbance, the specific power of salicylic acid, are all suggestive of an infectious disease."[1]

The Milroy Lectures on the natural history and affinities of rheumatic fever[2] added much important and extensive research on the epidemiology and seasonal prevalence of the disease, and Dr. Newsholme concludes a recent paper on this subject as follows:—

"Direct infection from patient to patient is rare, if it occurs. It seems most feasible to regard rheumatic fever as essentially a soil disease, due to a saprophytic soil organism, which is 'drowned out' in wet years, multiplies rapidly in dry years, and is transferred to the human recipient by unknown means. Possibly dust convection accounts for a large proportion of the

[1] Quoted by Poynton, *Practitioner*, 1901, lxvi. 28.
[2] Newsholme, Milroy Lectures, abstract in *Brit. M.J.*, 1895, i. 527, 581.

cases. In dry years the number of contagious particles is probably increased, and the facility with which they are communicated to the human subject is similarly increased. In the light of our recently acquired knowledge of the methods of infection in malaria, it is not, perhaps, too far-fetched to surmise that inoculation of the contagion of rheumatic fever may be caused by domestic vermin, or that the house-fly may convey it to milk or other foods."[1]

Some new points in the pathology of rheumatic fever, considered as the result of infection by a diplococcus, have been recently given by Dr. F. J. Poynton.[2] He describes a diplococcus which has produced, on intravenous inoculation into rabbits, the clinical appearances of rheumatic fever. He, in conjunction with Dr. Alexander Paine, has isolated these organisms from the blood, urine, and tonsils of the living subject suffering from rheumatic fever, and also from the pericardial exudation and cardiac valves after death. They were demonstrated in the visceral and parietal pericardium, cardiac valves, the pleural and pericardial exudations, the tonsils, and rheumatic nodules. They have produced, on intravenous inoculation into rabbits, polyarthritis, valvulitis, pericarditis, pleurisy, pneumonia, chorea, and nodules. They also produced coagulation-necrosis in the kidneys and liver. From their investigations Drs. Poynton and Paine deduce the fact that this diplococcus is a cause of rheumatic fever. They add that "it is not easy to demonstrate the organisms in the human tissues. Apart from their small size, and the question of technique, there is the difficulty that rheumatic fever is rarely fatal when its lesions are in the earliest phases, and the organisms are rapidly destroyed in these lesions. . . . A study of their life history in the human and animal tissues leads to the conclusion that they are destroyed at the sites of the local lesions. . . . The clinical expression of this conclusion is that the disease usually runs a favourable course. . . . The rapid destruction of the organisms by the human tissues receives a clinical interpretation in the fleeting character of the polyarthritis and ephemeral character of many of the symptoms of rheumatic fever." The authors further think that they have found an explanation of the relapses which are so frequent: they found in the healing lesions, and in cultures on suitable media, a solitary coccal form, larger than the individual element of the diplococcus. This form persists after the disappearance of the diplococcus, and possibly may persist in the living tissues for some considerable period of time, and recover virulence if the vitality of the tissues be lowered by exposure to cold, &c.

Drs. Poynton and Paine[3] have further pointed out that "the presence of the organisms in that form of arthritis brought

[1] *Practitioner*, 1901, lxvi. 21.
[2] *Ibid.*, 22; also *Lancet*, 1901, i. 1260.
[3] *Lancet*, 1901, i. 858.

acute rheumatic affections of joints into line with arthritis the result of septic gonorrhœal and pneumococcic infections. According to the researches of Dr. G. A. Bannatyne, Dr. A. S. Wohlmann, and Dr. F. R. Blaxall, rheumatoid arthritis must be included in that group also. . . . Another point to which they wished to call attention was the condition of the kidneys in acute rheumatism. In fatal cases they had found very definite changes in the parenchyma, especially of the convoluted tubules. . . . Further, they had isolated the diplococcus from the urine in acute rheumatic pericarditis. . . . They had collected facts to show that some cases of malignant endocarditis were truly rheumatic and not the result of secondary infections."

Dr. C. O. Hawthorne, in discussing the relation of acute rheumatism to chronic rheumatoid arthritis, remarked that "one of the most confident grounds on which an endeavour had been made to mark a distinction between rheumatism and rheumatoid arthritis was the absence from the latter condition of cardiac disease. Endocarditis, they all recognised, was in the great majority of instances an evidence of rheumatism, but it was an expression of rheumatism which was specially prone to manifest itself in childhood and early adult life. It was by no means a common expression of rheumatism in middle life, but the majority of patients with chronic rheumatoid arthritis were those who were approaching or had reached middle age. Therefore it by no means followed that the absence of cardiac complications from the great majority of cases of rheumatoid arthritis proved that it was a condition quite distinct from rheumatism. Moreover, Charcot had stated that cardiac complications and valvular disease occurred fairly frequently in cases of rheumatoid arthritis."[1]

It is interesting to note that an infective arthritis due to the pneumococcus has frequently been observed since its first description by Weichselbaum in 1888. A paper by Dr. Edward J. Cave (Bath)[2] describes a typical case of the acute suppurative form of the disease occurring as a complication or immediate sequel of pneumonia. He points out that "the association of the arthritis with other localisations of pneumococcic infection is the rule. The associated lesion is commonly in a vital part, and threatens life more than the arthritis. . . . But often there has been a widespread infection of the system by the virus, with malignant endocarditis, pleurisy and empyema, pericarditis, nephritis, meningitis, and peritonitis."

Dr. G. A. Gibson considers it highly probable that all cases of acute and subacute cardiac diseases are of microbic origin, and all may therefore be termed infective.[3]

Cases illustrating the possible infectiousness of acute rheumatism have been reported recently.[4]

[1] *Ibid*, 859. [2] *Ibid.*, 82.
[3] *Practitioner*, 1901, lxvi. 46. [4] *Ibid.*, 79.

Although the evidence before us tends to indicate that the acute arthritis of acute rheumatism and that of rheumatoid arthritis may both be dependent upon the presence of micro-organisms, yet the organisms described differ in character and in life history. Dr. Bannatyne concludes that the two diseases in the acute stages are quite separate and distinct,[1] and he holds that the chronic variety of rheumatoid arthritis follows altogether a different course to the acute forms, and might well be secondary degenerations following on any acute joint trouble.

Dr. St. Clair Thomson[2] admits a general acceptation of the view that an undoubted association exists between rheumatism and tonsillitis. He states that "the tonsil has been well termed by Gerhardt a physiological wound—an opening into the system which, if not maintained in a healthy condition, may allow the passage of general infection. How true this may be is shown by Jessen, who has recorded four cases of serious general infection from the tonsils—acute articular rheumatism, acute pyæmia, streptococcal and staphylococcal pneumonia." The observations of Poynton and Paine carry this question a stage further, inasmuch as they were able to produce a non-suppurative valvulitis and pericarditis in the rabbit by injection of certain diplococci isolated from the throat during an attack of angina faucium in a patient with rheumatic fever.[3]

The *rôle* of the tonsils in association with acute rheumatism is suggested by the observations of F. Meyer,[4] who, in making bacteriological investigations in cases of acute articular rheumatism, having failed to obtain results from the direct examination of the joint exudate, made cultures from the tonsils, and discovered a diplococcus growing in chains which closely resembled the organism described by Wassermann. This organism was not found on the tonsils of persons who had not acute rheumatism. Injected into animals, it produced a sero-purulent exudation in the joints, and in about one-fourth of the animals there was a verrucose or ulcerative endocarditis.

It has long been generally admitted that an intimate association exists between rheumatism and chorea, and a paper by Dr. George F. Still[5] points out that "in the light of bacteriology chorea may prove, in some cases at least, to be directly or indirectly, the result of microbic infection, and therefore just as truly a manifestation of rheumatism as the articular symptoms. If this were so, chorea, like the heart affections and the rheumatic nodules, might be expected to precede the joint symptoms in some cases, and might be the first, or possibly the only, clinical manifestation of rheumatism." The rheumatic nodule has long been looked upon as an important

[1] *Lancet*, 1901, i. 936.
[2] *Practitioner*, 1901, lxvi. 35.
[3] *Lancet*, 1900, ii. 861 *et seq.*
[4] *Deutsche med. Wchnschr.*, Feb. 7, 1901.
[5] *Practitioner*, 1901, lxvi. 53.

manifestation of rheumatism, and Dr. Still observes that "the histological character of these nodules shows that they are exactly analogous to the fibrinous deposit on the inflamed endocardium or pericardium, and their association almost always with endocarditis suggests that they are due to the same cause, the rheumatic irritant whatever it be."

Drs. Poynton and Paine have recently demonstrated the diplococcus in three rheumatic nodules, they have isolated the diplococcus, and by intra-venous inoculation of this culture they have produced valvulitis, pericarditis, and polyarthritis in a rabbit. They have further isolated the diplococcus from the joint exudate of this rabbit.[1]

As regards the treatment of rheumatic fever, an excellent summary of what can be done has recently been given by Dr. Arthur P. Luff.[2] In spite of the moderate commendation of the salicylates given by so experienced a physician as Osler,[3] few will agree with him that "medicines have little or no control over the duration or course of the disease, which, like other self-limited affections, practically takes its own time to disappear." We agree with Dr. Luff "that the patient should be got under the influence of salicylates as soon as possible, that complete and prolonged rest should be enforced, that he should be maintained free from pain, that he should be kept on a fluid and mainly a milk diet for some time, and that free diuresis and a daily evacuation of the bowels should be secured." The contention of Maclagan that the salicylates and salicin exert a specific and curative action on rheumatic fever is borne out by almost universal experience. Given in sufficient quantity, they rarely fail to relieve the pain and reduce the temperature. It may well be contended that they destroy the alleged micro-organism of the disease. It is due to the fact that they so quickly give relief that they are often discontinued too soon, and thus follows the too frequent relapse. The nauseating taste of the salicylate is a difficulty in its administration, and the occurrence of deafness, tinnitus, and nausea often lead to their discontinuance when they are still required. Many substitutes have been tried, which, whilst devoid of the unpleasant by-effects of the salicylates, have also been for the most part less actively beneficial. A new preparation called Aspirin, a combination of acetic and salicylic acids, the acetic ester of salicylic acid, is said to possess the following advantages over the salicylates:—

1. It does not cause any irritation of the stomach or disturb digestion.
2. Does not cause tinnitus aurium.
3. Does not depress the heart's action.

From a limited experience of the drug, the writer is able to say that it appears to be as efficient as the salicylates, whilst it

[1] *Lancet*, 1901, i. 1261. [2] *Ibid.*, 64.
[3] *Principles and Practice of Medicine*, 3rd Ed., 1898, p. 174.

is less nauseating and less likely to give rise to unpleasant effects on the nervous system.

Dr. Caton's method of blistering along the course of the intercostal nerves for the prevention of valvular disease of the heart does not appear to receive that amount of attention which the importance of the subject deserves.[1]

R. SHINGLETON SMITH.

SURGERY.

It is now eight years since Dr. William White, of Philadelphia, proposed **castration as a remedy for prostatic hypertrophy**, and in the "Progress of the Medical Sciences" in this *Journal* for June, 1895, I gave an account of this method of treatment and a table of some of the recorded cases. Two years after the publication of Dr. White's original communication, he published a paper giving the results of the operation in 111 cases, and in 1896 Dr. Cabot tabulated 99 additional cases. Last year Dr. Wood, of Philadelphia, published[2] brief details of 159 more cases, and it, therefore, seems a suitable time to review the results of this operation, and also of vasectomy for the same disease. Taking Dr. White's 111 cases first, we find that the prostate atrophied in about 87 per cent., and return of the power of micturition occurred in 66 per cent., with relief or cure of cystitis in 52 per cent.; 18 per cent. of the cases died; but Dr. White thought that if cases were excluded in which the operation could not have been the cause of death, the mortality of the operation in this series of cases might be taken to be 7 per cent. Out of the 99 cases collected by Dr. Cabot only 66 were published with sufficient detail to be of any value, and of these 66 Dr. Cabot considered that 83 per cent. were much better for the operation. The mortality in his series was also 19 per cent., but no doubt only a few of these died from the effects of the operation. Dr. Wood has collected records of 159 cases of castration, not included in Dr. White's or Dr. Cabot's lists. Of these 130 are available for evidence as to the result of the operation; and in almost half of these cases it is definitely stated, and in many more it seems to be implied, that the prostate atrophied after the operation. The power of micturition was improved or wholly restored in many, and cystitis was relieved or cured in 18 per cent., and in some cases the cure of severe cystitis was a marked feature. The mortality did not exceed 8 per cent., and only a few of the deaths seem to have been due to the operation itself, whereas in several of the fatal cases improvement followed the operation. Probably most died from secondary kidney

[1] *Brit. M. J.*, 1900, i. 631, 765. [2] *Ann. Surg.*, 1900, xxxii. 316.

disease, which an earlier operation might perhaps have averted. Only in six cases were there any mental symptoms. The mental condition is called delirium in most of these. When we remember that the operation is nearly always performed after middle life, and often in the elderly, it seems to me very doubtful if mental symptoms are more common after castration than after any other operation requiring anæsthesia in old people. No change in the voice or alteration of disposition has been noted in any of the cases. In a few cases in which vesical calculus and hypertrophied prostate have been present, the stone has been crushed after atrophy of the prostate had followed castration or vasectomy; and in one case an attempt to get a sound into the bladder failed before, but succeeded after, the size of the prostate had been reduced by castration. Bruns, of Tübingen, collected records of twenty cases in which the catheter had been used from two to twenty years, and then had castration performed, and eight of these had return of the function of micturition and were able to dispense with the use of the catheter. It is clear that we cannot promise any patient return of the power of micturition, even if the prostate atrophies (as it almost certainly will) after castration, if he has had to draw his urine off by catheter for some considerable time, but power returns in many such cases. Again, the amount of residual urine may or may not decrease or disappear. It did so in 25 per cent. of Dr. Wood's cases. In one case of my own, although the prostatic overgrowth completely disappeared, the amount of residual urine remained the same.

It seems to me then that, with regard to the results of castration, we may conclude that the prostate will probably atrophy, and, therefore, if catheterisation is difficult and painful, it will become easy and painless. Even if no urine can be passed without the passage of the catheter, and the condition has persisted for some few years, the need for the use of the catheter may cease. The amount of residual urine may be much reduced or disappear, and the frequency of micturition much lessened. Cystitis may be greatly improved, and in many cases is cured as the obstruction disappears. Although many cases die after castration from cystitis and secondary renal infection or atrophy, and from the exhaustion of the frequent painful micturition disturbing their sleep, yet in very few cases indeed has castration been a cause of death, and the risks of this operation are not to be compared with those of intravesical prostatectomy.

Dr. Wood has collected records of 193 cases of **vasectomy for enlarged prostate**. Unfortunately the results are not given so fully as those of castration, and, therefore, it is difficult to judge as to the benefit of the operation in these cases. So far as the evidence goes it shows that it does not produce nearly so decided a decrease in the size of the prostate as castration,

but in many cases there is an improvement in the power of micturition, diminution in the amount of the residual urine, and relief of cystitis. In 15 per cent. of the cases it is, Dr. Wood says, distinctly stated that no improvement followed the operation. There was nearly as large a percentage of deaths after the operation (6.7 per cent.) as in Dr. Wood's series of cases of castration, showing how little either operation has to do with the fatal termination; and the fact that some mental disturbance followed this operation of vasectomy in a few cases, also shows how little the actual removal of the testicles has to do with the mental symptoms following castration. It would seem then that the risks of castration are, if any, only very slightly greater than vasectomy, whereas the benefit is likely to be distinctly more marked after castration. But many patients will be willing to have vasectomy done, whereas they cannot bring themselves to entertain the idea of losing their testicles.

* * * *

Since the new method of treating tetanus by intracerebral injections of the antitoxin has now been employed in at least forty-eight cases, it seems a fitting time to refer to a recent paper by Moschowitz,[1] giving a table of 290 cases of **tetanus treated by subcutaneous or intravenous injection** and forty-eight by intracerebral injection. The mortality of all the cases of tetanus treated in the London Hospital (without antitoxin) in sixteen years was found by Mr. Dean[2] to be 80 per cent.; and it has been stated by others that all the very acute cases die, and that 90 per cent. is the general mortality of the disease. The mortality in the 338 cases treated by antitoxin collected by Moschowitz was 42 per cent.; but it must be considerably higher than this, as many fatal cases would not be reported. This is not very encouraging, but it probably indicates that the antitoxin is quite worth employing. The results from intracerebral injections are not any better than the other method, though the experiments of Roux and Borrel[3] promised much for this method, for they saved thirty-five out of forty-five animals by its use, whereas only two were saved out of seventeen by the subcutaneous method. If the antitoxin is injected very slowly into the brain, and the head is kept very still so that the needle will not lacerate the brain, the injections seem to do no harm. The *post-mortem* examinations made in several cases failed to show any signs of gross cerebral injury. The injections are made into both frontal regions, and only quite small trephine openings are required. The method is based on the belief that the toxin of tetanus has a special affinity for the central nervous system, and that it would, therefore, be wise to get the antitoxin directly applied to it.

[1] *Ann. Surg.*, 1900, xxxii. 219. [2] *Brit. M. J.*, 1894, ii. 579.
[3] *Ann. de l'Inst. Pasteur*, 1898, xii. 225.

But how can we expect to get the diffusion of the antitoxin all over the brain and spinal cord by injecting it into the frontal lobes? Surely an injection into the sub-arachnoid fluid might be more likely to bring it quickly in contact with the higher centres. Experiments have indeed been made by injecting the antitoxin into the subdural space of the cord in animals inoculated with tetanus,[1] but without success.

The statistics collected by Moschowitz bear out the generally received view that the shorter the incubation period of tetanus the more severe the form of the disease. The author considers that it has been demonstrated that the cerebro-spinal fluid of tetanus patients is more toxic than the blood, and that the anterior horns of the spinal cord are specially affected by the toxin of the disease. He points out that although the use of the serum is a most important factor in the treatment of the disease, other measures should not be neglected, and he calls attention to the chemical agents generally regarded as most potent in the destruction of the bacilli and their spores in the wound—a very important element in the treatment—and recommends the use of 1 in 1000 perchloride of mercury solution with ½ per cent. hydrochloric acid.

* * * *

Our knowledge of the **surgical treatment of pericardial effusion** has been extended by a recent paper by Dr. Porter, of Boston.[2] He has collected the records of seventy-five cases of operation for suppurative pericarditis. Twenty-four are referred to in a paper published in 1897,[3] and fifty-one are recorded in his more recent communication published last year.[4] He has made a careful study of the relation of the pleura to the pericardium with reference to deciding where the pericardium should be opened, and shows how close to the sternum the pleura may come, even as low as the sixth left interspace. After making experiments on the dead body, Porter decided to recommend the following method, because it will avoid opening the pleural cavity, and drainage will remain good after the sac has contracted. The fifth costal cartilage on the left side is resected, the division being made close to the sternum, the internal mammary artery and vein are double-ligatured and divided, and the pericardium incised, the edges stitched to the superficial structures, and a drainage tube introduced. Irrigation of the pericardial sac has been practised in more than half the cases, and is recommended by Porter with the object of removing fibrinous masses. Only in one case has any harm resulted from irrigation. In this instance the exit of fluid was obstructed by pieces of fibrin. He considers that the operation can be done in many cases under local anæsthesia. Porter is not the only surgeon who has

[1] *Berl. klin. Wchnschr.*, 1898, No. 49.
[2] *Ann. Surg.*, 1900, xxxii. 769.
[3] *Tr. Am. Surg. Ass.*, 1897, xv. 127. [4] *Loc. cit.*

recommended resection of the fifth left costal cartilage as the best method of reaching the pericardium. Ollier, Gussenbauer and Körte have all done so, and Mr. Betham Robinson adopted this method when operating on a child and found it satisfactory, though the child did not recover.[1] For a list of the many other situations in which the opening has been made, Porter's article must be referred to;[2] but one method of operating, lately proposed by Mr. Allingham,[3] must be noticed. Mr. Allingham records an unsuccessful case in which the method of drainage by removal of the fifth cartilage was employed, and proposes a method which he has tried twelve times on the dead body. The idea of the operation is, to reach the pericardium from below, at the most dependent part of the sac for drainage, and it is claimed for this method that the pleural cavity cannot possibly be injured. The seventh costal cartilage is exposed by an incision along its lower border, and the separation of the abdominal muscles from it. The cellular interval between the attachment of the diaphragm to this cartilage and to the xiphoid appendix is enlarged by cutting or tearing through the diaphragm as far as needful, and the loose fatty tissue being displaced the pericardium is reached. If the peritoneum is exposed it must be pushed down out of the way, just as it is in a suprapubic cystotomy

One advantage of avoiding the pleura in tapping the pericardium is shown by the fact that in two cases referred to by Jacobson in his work on *Operative Surgery*, the left pleural cavity was tapped under the impression that the pericardium had been reached, because the puncture had been made some distance from the left edge of the pleura, rather than close to that structure as recommended by Porter. With the statement of Porter's that because of the uncertain and varying relations of the pleura, and because of the anterior position of the heart in pericardial effusion, it is safer to make an open incision than to aspirate a serous effusion, we do not think most surgeons will agree.

* * * *

It is perhaps hardly realised by some surgeons that **circular suture of the blood-vessels** has not only been shown to be possible by experiments on animals, but has now been successfully performed in a good many cases on men. In nine cases arteries have been successfully sutured, and it is stated[4] that no unsuccessful cases have been recorded; though this, of course, by no means shows that there have been no unsatisfactory results. Dr. Kuemmel, of Hamburg, has recorded[5] one case in which a portion of the femoral artery was resected with some malignant glands and the ends united. The circulation in the vessel was controlled with artery forceps

[1] *Brit. M. J.*, 1898, ii, 1605. [2] *Ann. Surg.*, 1900, xxxii. 774.
[3] *Lancet*, 1900, i. 693. [4] *Ann. Surg.*, 1900, xxxii. 730. [5] *Ibid.*, 728

covered with rubber tubes. The ends of the divided artery could only be approximated by extensive freeing of the vessel from its bed and flexion of the thigh. Circular suture was applied, and only penetrated the outer coat. The patient died a few months later, and at the *post-mortem* the line of suture in the vessel was not visible, but clot occupied the lumen of the vessel up to the iliac. It does not seem clear if the lumen was completely filled by this clot, but if so the vessel might as well have been ligated. The same surgeon also records a successful case of resection and circular suture of a portion of the femoral vein. Two cases of suture of wounds of large arteries—one the internal carotid injured in the removal of cancerous glands, and the other the brachial artery in an operation for traumatic aneurysm—are recorded by Doerfler as operated on by Barré.[1] In both primary union occurred, and in one case, at any rate, it is clear the lumen of the vessel was not obliterated. The author has experimentally determined that the presence of the thread in the lumen of the vessel does not interfere with its patency. As rigid asepsis is essential for success, the method must never be attempted in any infected wound. Indeed it seems to me that, although the results so far have been very encouraging, the force of the circulation is often so great that there must be considerable risk of hemorrhage in the case of sutured arteries.

C. A. MORTON.

OBSTETRICS.

The existence of **uterine fibromyomata** in women has one most important aspect which has not received, perhaps, that amount of attention which is its due, in view of the serious complications which may arise.

The presence of fibromyoma cannot but impair the fertility of the patient, and, moreover, should conception occur, may be the cause of imminent risk, both from the effects of the tumour on the reproductive process and from the effect of parturition or abortion on the tumour. Ample evidence, as might be expected, is forthcoming of the results of the presence of fibromyoma on conception; this is only to be expected when we consider how often, apart from any mechanical obstacle, the uterus affected is the subject of chronic inflammatory changes in its mucous membrane. At the same time, although the probability that the patient with fibromyoma of the uterus will become pregnant is lessened, yet a sufficiently large number of pregnancies occur to render the study of this complication of much practical value. Hofmeier[2] concludes from the observation of 150 cases that unmarried women do not

[1] *Ibid.*, 730. [2] *Am. J. Obst.*, 1901, xliii. 252.

suffer from this neoplasm more often than married women, having regard to the proportion between the numbers of the two classes. As regards the married, the proportion of sterile marriages among those who suffer from uterine fibroids is more than double that of all marriages—25 per cent. of marriages when the woman suffers from fibroids being sterile, against 11 per cent. of all marriages. Among 550 patients, 224 were nulliparous and 70 were uniparous, which appears to show, in Hofmeier's opinion, that the absence of pregnancy favours the growth of fibroid tumours. This, however, would appear to be capable of another interpretation. He is of opinion that the existence of these tumours has little effect on conception, and rarely interferes with the course of pregnancy. He also states that labour proceeds favourably with some attention, but that operation may subsequently be necessary. These last two views will not meet with general acceptance, and we shall show later that others consider fibroid tumours very serious complications of gestation and parturition, often needing severe radical operations.

Kreutzmann[1] reports two cases of fibroids complicating labour: in the first the patient nearly died of *post partum* hemorrhage; she had suffered much pain throughout her pregnancy; the tumours, two in number, were found to have almost disappeared later. In the second case miscarriage occurred in the fifth month; the patient had two tumours the size of cocoa-nuts. In a second pregnancy both tumours had diminished in size, but abortion occurred, followed by sapræmia, for which curetting had to be performed.

Bland Sutton[2] gives records of some interesting cases. In one a submucous fibroid the size of the fœtal head was expelled after delivery—it became septic and sloughed, the patient dying in consequence. No operation could be done, as the patient's condition was too bad. He quotes a case reported by Yeld[3] in which a sessile tumour, mistaken for the placenta, was removed by the blunt hook, the patient dying two hours later from shock. The tumour weighed 4½ pounds.

In another case a tumour was felt in the pelvis, but could be pushed up out of it. It was suspected that it was ovarian, and it was tapped, but no fluid evacuated. The patient was delivered with considerable difficulty; a few days later the tumour became septic, and five weeks after delivery a sloughing fibroid was expelled from the uterus. The patient ultimately recovered.

Champneys[4] collected quite a large number of cases showing that fibroids often complicate labour and frequently cause death.

Sutton sets down the dangers as follows: (1) The presence of the tumour often leads to impaction and abortion, when there

[1] *Ibid.*, 166. [2] *Lancet*, 1901, i. 452.
[3] *Brit. M. J.*, 1871, i. 586; quoted by Bland Sutton, *loc. cit.*
[4] *St. Barth. Hosp. Rep.*, 1877, xiii. 114; quoted by Bland Sutton, *loc. cit.*

is great liability to hemorrhage. (2) A submucous tumour may become septic and slough; occasionally it is expelled before the presenting part, but more usually is extruded subsequently. (3) A submucous tumour may become œdematous—the emptying of the uterus being followed by its inflammation, and leading to peritonitis or the formation of very vascular adhesions. (4) Occasionally a pedunculated submucous fibroid may become incarcerated in the pelvis and simulate an ovarian tumour.

* * * *

One of the earliest signs in **pregnancy complicated with fibroids** is pain usually due to impaction.

In two cases, unsuspected pregnancy of four months duration was found after hysterectomy for fibroids.

In two others enucleation of the tumour was performed without disturbing pregnancy. In one a fibroid had become impacted under the pelvic brim on one side, and caused rotation of the fundus uteri to one side until it lay almost horizontal; in the other case the tumour had to be separated from the anterior wall of the uterus and bladder. Pregnancy was undisturbed in both. In six cases quoted by Sutton in which fibroids were removed during pregnancy by various operators one patient died; the remainder went to full term. Gemmell[1] reports a case in which several tumours were enucleated and the patient went to term.

Cases in which the tumour underwent necrotic changes after abortion are reported by Sutton[2] and Cole Baker.[3] In Sutton's case symptoms of peritonitis arose; hysterectomy was done and the patient recovered. In Cole Baker's case the uterus was retroverted and incarcerated, and after reduction fever occurred, followed by abortion and symptoms of peritonitis. Hysterectomy was followed by the patient's recovery.

Sutton[4] remarks on the danger caused by abortion in fibroids owing to the likelihood of necrotic changes occurring in the tumour unless the most rigid precautions to secure asepsis are successfully used.

Pain in these cases is usually due to impaction or torsion of the enlarging uterus, either of which will lead to abortion unless the tumour is dealt with surgically.

Spinelli[5] removed from the uterus of a woman four months pregnant a fibroid weighing $3\frac{1}{2}$ kilogrammes, or $7\frac{3}{4}$ pounds. Abortion followed, but the patient made a good recovery. During a subsequent pregnancy vesical symptoms became severe, and, by vaginal cystotomy, were removed two large calculi formed around two ligatures which had found their way into the bladder.

In one of Sutton's cases, after the reduction of a retroverted fibroid uterus, two swellings appeared in the iliac fossa, and

[1] *Lancet*, 1900, ii. 1413. [2] *Loc. cit.* [3] *Dublin J. M. Sc.*, 1900, cx.
[4] *Loc. cit.* [5] *Am. J. Obst.*, 1901, xliii. 132.

acute pain was present. Cœliotomy and hysterectomy were performed: two fibroids—one anterior and one posterior—were present, which had caused axial rotation of the uterus through a quarter of a circle. The left ovary and tube were also removed.

Septic infection of the tumour, necrosis and peritonitis, may each and all arise from either premature or full-term delivery—either from septic uterine infection, manipulation, bruising or pressure of the fœtal parts. One recorded case, apart from pregnancy, died from peritoneal infection transmitted through the Fallopian tubes. Even should natural attempts at conservation produce sealing of the abdominal ostium of the tube, pyosalpinx is likely to result, so that the prospect for these patients is by no means bright, lying between pregnancy prematurely terminated exposing the patient to danger from sepsis, and that terminated at term having superadded those dangers produced by obstructed labour. The point for decision would then be the advisability of allowing the patient to go to full term, or at any rate leaving her until the period of viability of the child was reached; generally this would not appear to be advisable, and in the majority of cases this point has been reached by a patient in whose case the question of the possibility of obstruction had not been recognised. The safer plan would be to avoid delay and so render the patient safe from the risks attendant on abortion by early operation. In cases of obstruction the usual course has been to attempt to push the tumour out of the way, and then to deliver by forceps or version; or, if this cannot be effected, to deliver by Cæsarean section, followed by removal of the uterus.

This method of procedure is one which is not attended with great difficulty, since the pelvic attachments are lax and easily separated. The great enlargement of the blood-vessels, however, should be borne in mind, since this renders the possibility of their division by the ligature greater.

Out of nine cases operated on in this way by different operators, one died. In only three, however, was the operation undertaken late in pregnancy. Pushing up the tumour, and delivery by forceps or version, is not a very safe proceeding when the patient is in labour, since some amount of tearing of the tumour is extremely likely to occur, if not from instrumental interference, at any rate by the efforts of the uterus to expel the fœtus. Should, however, this procedure be adopted, a constant watch for dangerous symptoms must be kept during the puerperium, and should these arise, the tumour must be removed without delay. Myomectomy and hysterectomy have been quite safely carried out during the puerperal period.

Cragin [1] reports a case in which, after a tedious deliver y

[1] *Am. J. Obst.*, 1901, xliii. 236.

completed by forceps and attended by much hemorrhage, the temperature remained febrile for a month after delivery. Hysterectomy was performed, the uterus and tumour weighing 8 lbs. Necrotic changes in the tumour were well marked.

Dudley [1] relates a case in which, after delivery effected by forceps, the patient had some elevation of temperature. On the 10th day he removed sixteen fibroids from the uterine wall of various sizes: four were larger than an orange, the remainder varied from the size of a pea to that of a walnut. In removing one of them the uterine cavity was opened, and it was found that the uterine wall had been torn by the forceps, and that to this the rise of temperature was to be attributed.

Eustache [2] reports a successful case of total abdominal hysterectomy for labour obstructed for several days by a large fibromyoma. The operation was easy, and he considers that it should always be adopted in these cases.

Lloyd Roberts [3] reports a case in which Cæsarean section was performed on a woman in whom the pelvic cavity was blocked by a fibroid, which rendered delivery *per vias naturales* impossible, as it reduced the conjugate diameter to an inch and a half. The child did well and was living at the time of the report. The patient had, however, considerable rise of temperature, due to sepsis, and was treated with injections of strepto-antitoxin. She eventually recovered.

Macleod [4] reports a case in which abdominal section was undertaken for apparent retroversion of the gravid uterus, with partial impaction at term; adhesions preventing rectification, Cæsarean section was performed, and, in addition, a fibroid removed from the anterior uterine wall. Reduction proved impossible, even after the removal of the child, owing to dense adhesions. The patient recovered.

Of the dangers which arise during parturition, apart from obstruction, the cases quoted by Kreutzmann are typical instances. The chances of severe *post partum* hemorrhage are vastly increased, and the difficulty of successfully combating it also.

Another danger, a case brought to my own knowledge will illustrate. A patient was delivered at term and the placenta retained. Hemorrhage of a moderately severe nature occurred. The practitioner in attendance proceeded to remove the placenta by introducing the hand into the uterus, but found that it had partially escaped into the abdominal cavity through a rent in the uterine wall by the side of the tumour. The laceration had occurred without producing any well-marked symptoms. The placenta was extracted, but the patient died a few days later of general peritonitis. The practitioner was single-handed, in a remote country district, where help could not be obtained.

[1] *Ibid.*, 237 [2] *Ibid.*, 253. [3] *Lancet*, 1900, ii. 1016.
[4] *Brit. M. J.*, 1901, i. 141.

A large number of cases of operation are recorded, of which the foregoing are only a small selection. It now remains to see how the results of operation compare with those of natural delivery.

Natural delivery in these cases is by no means a safe termination, but, on the contrary, one attended with grave risk to both the mother and child.

Hirst[1] gives the following records, collected by different authors, as shewing the prognosis of natural delivery. Nauss and Süsserott have collected 372 cases, with a maternal mortality of nearly 50 per cent., and an infantile mortality of nearly 60 per cent. Lefour, whom he also quotes, gives the maternal mortality of 300 cases as varying from 25 to 55 per cent., and the infantile mortality as 77 per cent.

We have already seen from the results of operations by Sutton and others, quoted previously, that the maternal mortality is not high considering the difficulties of the condition. Hirst quotes Dsirne's statistics, which bear out this view entirely. Dsirne collected 135 cases of operation, for this complication of pregnancy and parturition. The mortality was 5.9 per cent., which is sufficiently low. Even allowing for a mortality of treble this percentage, we should still have a considerable margin, as against the results of the natural process with the various ways in which fatal complications may be caused. He also states that pregnancy is interrupted in about 20 per cent. of the cases operated on.

WALTER C. SWAYNE.

Reviews of Books.

A Manual of Medicine. Edited by W. H. ALLCHIN, M.D. Vol. I.—*General Diseases.* Pp. x., 442. Vol. II.—*General Diseases (continued).* Pp. viii., 380. London: Macmillan and Co., Limited. 1900.

We have here the first instalments of a treatise on medicine which has been planned on thoroughly practical lines. Instead of one or two cumbrous volumes, we have a series of easily-handled little books giving as much matter; instead of a wide range of subjects treated by one man, whose interest, if not his knowledge, must fail at times, we get a series of monographs written by an exceptionally able group of men, each of whom has made a special study of some branch of the whole. There are valuable illustrations and coloured plates, and the recent

[1] *An American Text-Book of Obstetrics*, edited by Norris, part ii., 1896, 558.

advances in bacteriology and pathology have been grouped in many cases into special articles, and treated with unusual fulness. We are almost inclined to regret the space taken up by some of these papers in a treatise on practical medicine, but they are excellently done in themselves and the clinical articles are thus relieved from many prolix digressions. It is a great advantage to have full descriptions, for example, of the microscopical technique of blood stains and other tests. And indeed there are a remarkable number of articles of special interest in the book. The chapters on parasites and the diseases caused by them are some of the most fascinating we have seen, and have numerous illustrations. Acute and subacute rheumatism find themselves in a different volume, away from gout, chronic rheumatism, and rheumatoid arthritis; the former are well treated by Dr. Lees, who lays stress on the importance of the disease in childhood, as more frequent, more varied, and more virulent than in adults. Indeed, he finds the age at which the maximum incidence occurs is about ten years. Naturally he lays much stress on the essential character of the heart affection, but we doubt whether there is general agreement as to the very serious view he takes of the rarer, so called, pneumonia in acute rheumatism. We miss any reference to the newer methods of giving the salicylates in difficult cases, such as rectal injections, salophen, and other weaker compounds which are unirritating. A remarkable feature of the work is the number of well-known authorities who have contributed articles—Dr. Luff's able summary of the accepted teaching on gout, Copeman's account of variola, Washbourn, Hale White and Caiger on fevers, are instances. The tropical diseases are discussed in a numerous series of papers, but malaria itself is rather briefly treated, and the only plate of the organisms in the blood which we can find is a solitary figure in the second volume. This is a defect which will, we hope, be remedied in a later edition, for it is hard to overrate the importance of familiarity with the appearance of the protozoa in doubtful cases, even for practitioners in England. In the account of plague, one bacillus is described as the accepted cause of the disease. As a matter of fact the credit is given by many authorities to a totally different organism. Though both are often present, it is very misleading to a student to find the most prominent one quite ignored in the text and plates. Whatever a writer's opinions are, it would not be fair to put forward, say, Friedlander's coccus instead of Fränkel's as the accepted microbe of pneumonia. Probably most readers will turn with interest to the able general papers by Sims Woodhead on "The Infections," by Lazarus Barlow on "Inflammation," by Louis Jenner on "The Blood in Health and Disease," and by Rose Bradford on "The Ductless Glands," which summarise a vast amount of the recent advances in scientific medicine. The difficult subject of the classification of the various forms of meningitis is partly entrusted to G. F. Still, who considers the

infective forms under the headings of (1) epidemic, (2) posterior basic, (3) and suppurative meningitis; while the tuberculous, syphilitic, and perhaps some other forms are reserved for treatment elsewhere. It seems somewhat unfortunate that all forms were not considered together for the purposes of comparison, and to prevent the accidental omission of outlying members of the group. However, no classification of disease is without its difficulties, and the general excellence of the work will, we are sure, be endorsed by numerous readers.

Pernicious Anæmia: its Pathology, Septic Origin, Symptoms, Diagnosis, and Treatment. By WILLIAM HUNTER, M.D. Pp. xvi., 464. London: Charles Griffin and Company, Limited. 1901.

The disease first described by Addison in 1855 under the name "Idiopathic Anæmia," and afterwards re-described in 1871 by Biermer under its present name, has been hitherto so wrapt in mystery as to justify the description given by Pye-Smith in 1883, who remarked: "The essence of this disease was, that it was without any symptoms during life, and without any lesions after death, which could not be explained as directly due to the anæmia."[1] The investigations now recorded have changed all this: they give the results of many years of painstaking and laborious work, but this has not been unproductive, inasmuch as it has been possible to deduce conclusions of a very definite character which lead to important results. "As regards its *nature*, they show the disease to be not merely a special form of anæmia, but a definite and—in regard to mode of onset and site of infection—a well-characterised, chronic, infective disease, localised to the alimentary tract, one in which long-lasting *sepsis*, oral and gastric, plays an essential and important antecedent and concurrent part. As regards its *symptoms*, so far from the anæmia being the sole feature of the disease and the cause of all its symptoms and lesions, it is only one of the symptoms; and there are at least three other groups, hæmolytic, gastro-intestinal, and toxic—no less striking, in their grouping no less characteristic, and, in regard to the site of infection, far more instructive than the actual anæmia itself—caused, not by the anæmia itself, but by the infective agencies underlying the disease. As regards *diagnosis*, the disease can, even in its early stages, if not easily, yet with certainty, be diagnosed both during life and after death; *during life*, by having regard to (1) its mode of onset, with special reference to its oral and gastric symptoms; (2) the degree of blood change, out of all proportion to that caused by organic or wasting disease even when severe; (3) the characteristic groups of symptoms I have described; and *after death* by the no less characteristic changes

[1] *Guy's Hosp. Rep.*, 1883, xli. 219.

in the liver, bile, and kidneys. Lastly, as regards *treatment*, the conclusions suggest new lines in regard both to the prevention of the disease, and possibly also to its permanent arrest after it has commenced."

These remarkable results are difficult to realise; that we should be asked to accept the statement that the disease has a special (infective) etiology underlying it would be too much to ask if we did not feel sure that the author is a reliable investigator and is not likely to be mistaken in his inferences. His work refers only to the special form of anæmia differentiated by Addison, and it occurs apart from the usual causes or concomitants of the anæmic state. He does not recognise any primary or secondary forms of the disease or any association with all ordinary anæmia-producing factors. The disease is shewn to be "not only a clinical, but also a pathological entity; no mere aggravation of an ordinary anæmia, but a special and distinct variety," and the author formulates the following definition:—

"Pernicious anæmia is a chronic infective disease localised in the alimentary tract:

Caused by a definite infection of certain parts of the mucosa of the alimentary tract, chiefly of the stomach, occasionally also of the mouth, and of the intestine.

Characterised by:

(1) Intermittent destruction of blood and increasing anæmia —and all the other pathological and clinical changes consecutive to these; *eg.*, anæmia, lemon colour, urobilinuria, hemorrhages, dyspnœa, palpitation, œdema,—as the result of the hæmolytic action of poisons in the blood.

(2) Periodic disturbance of the alimentary tract, chiefly of the stomach and the intestine, as local irritant effects of the infection on the alimentary canal; and

(3) Occasional toxæmic attacks, characterised by fever, sweating, general nervous symptoms, not infrequently by effects; *e.g.*, numbness, tingling, ataxia, absence of reflexes, denoting deeper nervous changes, such as peripheral neuritis, sclerosis of the cord.

As regards treatment, the objects to be aimed at are three:

1. Prevention and removal of the infective cause.

2. Removal of the gastro-intestinal conditions favouring its operation.

3. To combat the chief symptoms."

The hygiene of the mouth demands, therefore, the most scrupulous attention. Further, it is needful to remove or lessen the septic catarrh of the stomach. The antiseptics which the author appears to prefer are salicylic acid and salicylate of bismuth. These measures should not replace, but should be supplemented by, the use of arsenic. If they fail treatment by antistreptococcic serum holds out some prospect of improvement. We hope that this prospect will in due time be verified,

and that the work of Dr. Hunter will direct the attention of medical observers generally to cases which have been frequently overlooked until they are beyond the reach of any kind of treatment.

Fractures. By CARL BECK, M.D. Pp. 335. Philadelphia: W. B. Saunders & Co. 1900.

In the preface the author says the use of the Röntgen ray "has led to many and revolutionising discoveries; most of these have marked a clearer understanding, and consequently the better treatment of fractures. . . . This book is an effort to encompass, in a systematic treatise, the important essentials of the publications on this subject."

All the fractures in the different regions of the body are taken seriatim, and the symptoms and treatment appropriate to each are discussed; and, in addition to this, all the common forms of fracture, and many of the rarer forms, are skiagraphically illustrated. These skiagrams are for the most part excellent reproductions, but some of those of the deeper parts of the body and of the skull are not particularly clear, and do not much help the elucidation of the text.

As an example of how much skiagraphy has done to make our knowledge of fractures more exact, take the fractures of the lower end of the humerus. The author divides these into four kinds: supracondylar, diacondylar, epicondylar, and intercondylar, and this seems to be a very good way of classifying these fractures. Again, take the fractures of the lower end of the radius massed together under the name of Colles' fracture. These are here classified into—epiphyseal separation, fissures (infractions), complete fractures, incomplete fractures, fractures of the lower end of the radius combined with infraction or fracture of the head of the ulna, and fractures of the lower end of the radius combined with fractures of the styloid process of the ulna. (This latter complication the author finds to be present in 32 per cent. of all cases of fracture of the lower end of the radius.)

The chapter on general treatment at the beginning of the book is exceedingly practical and full of sound common sense, and the author is not at all afraid of expressing his opinion; *e.g.*, he dismisses the question of wiring the fragments in a simple subcutaneous fracture by calling it a "surgical aberration" (p. 51). Again, when discussing the wiring of the fragments in fractured patella, he says: "Complicated manœuvres, like boring holes into the fragments, &c., cannot be too strongly condemned, since simply conducting a large needle armed with silver wire around the fragments secures their perfect opposition" (p. 201). This statement a good many surgeons would take exception to.

Not the least useful part of the book is the chapter on "Errors of Skiagraphy," pointing out the difficulties of reading a skiagram correctly, and the danger of relying for a diagnosis on a single skiagram, it being absolutely necessary in many cases to have skiagrams taken from more than one point of view.

The book on the whole is distinctly a useful clinical treatise on fractures, and shows well how much our knowledge of fractures has been increased by the use of the X-rays.

The Pathology and Surgical Treatment of Tumors. By N. SENN, M.D. Second Edition. Pp. 718. London and Philadelphia: W. B. Saunders. 1900.

Owing to the progress of knowledge, successive generations view the problems presented by the pathology and treatment of disease, from different standpoints; hence every age needs its own interpreters.

This is specially true of the vast subject of tumour formation, with which Dr. Senn has dealt so ably in the volume now before us. His book on the pathology and treatment of tumours is in many respects an excellent one; and it enjoys the distinction of being the only modern work of the kind extant.

We should like to have seen, however, the essentially modern features of the subject more prominently and thoroughly set forth than we find them, for there is apparent a bias towards mediævalism and the doctrines of the days of other years.

Those who write on subjects still in their infancy must of necessity deal largely in vague generalities, for the very good reason that particularities are then scanty or wanting; hence these pioneers are obliged to classify their subject matter under broad and comprehensive headings, which conveniently cloak the scantiness of the data at their disposal.

In treating of tumours, such was the method adopted by the authors of the first half of the nineteenth century—Müller, Virchow, Broca, etc.—who described the different kinds of tumours under such comprehensive headings as cancer, sarcoma, lipoma, myoma, cystoma, etc.

Under the totally different conditions now prevailing, it seems questionable whether Dr. Senn has done well to follow the "old guard" in this respect.

The chief characteristic of modern tumour science is the immense accumulation of detailed facts, relating to the life-history of the different *local* varieties of the disease, that has taken place during the last half-century. We want to see these *membra disjecta* co-ordinated and arranged, in a concise and accurate manner, so that their significance may be readily grasped by the ordinary reader. In this respect, it seems to us that Dr. Senn's work leaves much to be desired.

It has been said of Austerlitz that it was a battle lost before it was begun, owing to the faulty initial dispositions of the allies. In like manner, it may be said of Dr. Senn's book that it has to a large extent failed to attain the end in view, owing to its facts being marshalled in accordance with the ancient order of ideas. The new wine ill accords with the old bottles. Thus the work, although young of years, savours of the nineteenth, rather than of the twentieth, century.

Whether we view the subject from the genetical, morphological, pathological, clinical, or therapeutic standpoints, there can be no doubt that, in a modern work, tumours should be described in accordance with the organs and localities whence they originate, rather than in vague general terms, which convey to the mind only confused ideas, instead of that *netteté* which is so desirable.

Another important respect in which Dr. Senn seems to have missed the modern spirit of investigation is in his neglect of the numerical method, which has of late rendered such immense service to medical science. Owing to this lapse, his descriptions often lack accuracy of statement, as well as symmetry of development.

For instance, what can be more inaccurate than the statement made on page 67: "that, on the whole, the male sex is more predisposed to tumour-formation than is the female"? The truth is exactly the converse: thus we have found the ratio to be as follows—cancer, 5,017 females to 2,861 males; sarcoma 648 females to 702 males; non-malignant tumours, 3,434 females to 1,179 males; and cysts, 1,640 females to 449 males.

Again, on page 71, to show the relative frequency with which the different organs are affected with tumours, an ancient table by C. O. Weber is cited, which is most misleading. Yet plenty of thoroughly reliable modern statistics bearing on this important subject are available.

Owing to neglect of the numerical method, Dr. Senn has fallen into the serious mistake of maintaining that non-malignant tumours are specially prone to become malignant (p. 81). This relic of mediævalism can be shown to be totally false by the intelligent use of modern statistics; and we are surprised to find it reappearing in Dr. Senn's work, for it is a fetish to which many valuable lives have been unnecessarily sacrificed.

To show the prevalence of cancer in England, the Registrar-General's figures for the years 1860–70 are quoted (p. 203). We cannot help wondering why statistics thirty years out of date should be cited when recent ones are available, especially as these ancient data are now absolutely useless for the purpose in view, owing to the disease having since increased so rapidly.

On page 238 we find a statement to this effect: "One of the most instructive evidences of the influence of prolonged irritation and inflammation in the causation of carcinoma is

chronic eczema of the nipple, known as 'Paget's disease of the nipple.'" Here, again, an acquaintance with the numerical method would have prevented Dr. Senn from making a statement than can be proved to be without any foundation. The real truth of the matter we have found to be as follows: When Paget said that chronic eczema of the nipple was "very often" followed by the development of cancer in the breast, there can be no doubt that he made a mistake. Paget adduced no statistical data in support of his opinion; but, since his publication, the subject has been numerically investigated on a large scale, with the result that cancer of the breast has been shown to follow eczema of the nipple *in only about ½ per cent. of the total cases*. We may, therefore, in spite of Dr. Senn's dictum, disabuse our minds of the idea that "Paget's disease" plays an important part in the pathogeny of mammary cancer. Eczematous affections of the nipple, etc., are very seldom followed by the outbreak of cancer in the breast, hence the mamma should never be extirpated for such affections, unless signs of concomitant malignant disease are also present.

Blood and Blood-Pressure. By GEORGE OLIVER, M.D. Pp. 272. London: H. K. Lewis. 1901.

This work, by a physician, is both a contribution to the physiological side of medicine, and also gives valuable information for the clinical aspect of circulatory disturbances. It is gratifying to see that a physician in active practice is able to add appreciably to our knowledge of the physiology of the circulation. In these days of specialism it is unfortunately not so common an occurrence as is to be desired.

If physiology is to be really useful to the medical student, he should be able to carry on and apply his physiological knowledge when he comes to the bedside; and if there were any class of disorders in which this should *à priori* be most readily done, it would be those of the heart and vessels. But unfortunately this has hitherto only been the case to a very disappointing extent, and it was this aloofness from clinical work and practice of the physiological facts pertaining to the circulation so painfully acquired by the student that led Dr. Oliver to make the successful step that is embodied in the book before us to bring the two into harmony. The result is, as we have said, a contribution of great value both to physiology and medicine.

To accomplish his end, new instruments of precision were required, and fortunately Dr. Oliver possessed the mechanical ingenuity to invent them. He has given us, described in this book, a new hæmoglobinometer and hæmocytometer, based on colorimetric methods—they appear to be simple of application and accurate in results; and also a hæmodynamometer or

blood-pressure gauge, and an arteriometer, which is an improved form of the one previously invented by him. It is claimed for these instruments, apparently with ample justification, that they are simple, easy to work with, do not occupy much time, give accurate results, and substitute measured results for vague estimates, thus helping to precision in clinical work. A full description and mode of using these instruments is given, and also the results which the author has obtained from their employment in clinical practice. These are of great interest and of practical importance, and we think that medical men who desire to increase the accuracy of their work will be glad to adopt them. However this may be, the author's book is a real and original addition to the clinical study of the circulation, and will well repay careful study.

Diseases of the Upper Respiratory Tract. By P. Watson Williams, M.D. Lond. Fourth Edition. Pp. xxiv., 436. Bristol: J. Wright & Co. 1901.

The new edition of this work is not only twice the size of the previous edition, but it contains so many improvements both in the text and in illustrations that it may fairly be described as a new work. Perhaps the principal feature of the book is the presence of 37 large-sized and admirably-executed plates. Some are coloured drawings and others are stereoscopic reproductions of anatomical preparations illustrating the anatomy of the various sinuses of the skull, the nasal fossæ, the pharynx, the distribution of nerves and vessels to the neck, the middle ear, &c. They are drawn from various sources, but some of the most striking are from the museum of University College, Bristol, while others are from the Royal College of Surgeons, the Westminster Hospital Museum, &c. Each copy of the book is accompanied by a small and simple stereoscope, which, with a little practice, enables the student to obtain an admirable stereoscopic view of the clinical anatomy of the nose, pharynx, larynx, sinuses, &c., familiarity with which is essential for a thorough understanding of the diseases of these parts. Diseases of the ear are not included in the book, but there is an excellent chapter on examination of the ear, a knowledge of which is essential to the proper understanding of diseases of the pharynx and nose; on the other hand, diseases of the nasal cavities, pharynx, naso-pharynx (which the author prefers to call rhino-pharynx), and the accessory sinuses are admirably and fully treated. Adenoids are amply described. The author favours the use of Gottstein's curette as modified by Delstanche, and he places the patient in the recumbent position with the head hanging over the end of the table.

For the removal of soft gelatinous polypi from the nose we are glad to find that Dr. Watson Williams favours the use of

avulsion. It has been too much the fashion of late for specialists altogether to decry the use of forceps for this purpose and to allow no instruments but snares or cutting scissors. No doubt in unskilful hands much damage may be done by forceps in this region, but if carefully used, always with a good reflected light, we are sure that for many cases at least no instrument is so handy or useful as the forceps. We are surprised at the author's statement that "Sarcoma is rarely primary in the nose, while carcinoma is extremely rare." We have seen so many cases of primary malignant disease in this region, that such cases can hardly be rare; perhaps they are most frequently seen in the practice of the general surgeon.

The chapter on diphtheria is one of the best and fullest in the book. The author believes in a membranous croup which is not diphtheria, but which has a high mortality. He points out very clearly the close connection between fibrinous rhinitis and diphtheria, and gives an excellent description of the different forms of bacilli met with in diphtheritic affections. We note the omission of any statement as to the period of incubation of diphtheria; this is a matter which is often referred to by practitioners, and some information should be given, even if it cannot be dogmatic.

Dr. Watson Williams still believes in the old-fashioned "steam-bed" in the treatment of membranous croup, and he favours intubation rather than tracheotomy in this disease. A good description of the operation of intubation is given, with illustrations of the instruments, but no account of the operation of tracheotomy can be found; this surely is an omission. The various forms of paralysis of the vocal cords are admirably described, and full acknowledgment is made of the work of Felix Semon in this department. Perhaps sufficient prominence is hardly given to the functional paralysis known as "hysterical aphonia." On looking in the otherwise copious index for this disease we failed to find it, and the tyro might easily fail to notice it under the heading of "Bilateral Functional Adductor Paralysis."

Diseases of the nasal accessory sinuses have come much into notice during the last few years. Dr. Watson Williams considers that the large majority of cases of sinusitis have succeeded to attacks of influenza, and it is only since the occurrence of the influenza epidemics commencing in the year 1889 that inflammatory diseases of the accessory sinuses have become common affections.

The stereoscopic plates at the end of the book are particularly valuable in illustrating the relations of the various sinuses and their channels of communication with the nose. The student of these parts will owe a debt of gratitude to Dr. Watson Williams for these admirable pictures, as well as for the lucid descriptions which are appended. We believe it is the first time that the stereoscope has been introduced into a book,

and the stereoscopic plates will be quite a revelation to those who have not previously seen such pictures of anatomical subjects by stereoscopic aid.

The work is published in two forms, either as one complete volume, or in two parts—Part I. being the text complete, with over 200 illustrations; while Part II. is the atlas of plates, with the stereoscope. Doubtless some students will be glad of the alternative which enables them to buy an extremely cheap, handy, and complete text-book, to which Part II. may be added later if desired, or *vice versâ*, although we feel sure the possessors of either part will take the earliest opportunity of completing the volume.

The book as a whole will fill a much-needed want, and will take its place as one of the most complete works on the subject in the English language.

We can but congratulate the author and the publishers on the form of the book and its moderate price.

The Bacteriology of Every-Day Practice. By J. ODERY SYMES, M.D. Pp. 89. London: Baillière, Tindall and Cox. 1900.

As science continues to progress, it is unavoidable that those who have already passed through their student days should find themselves left behind. Their daily occupation in many cases prevents them from devoting time to keeping up their knowledge by reference to the periodicals which deal with recent researches in the various branches, and when the branch itself is a young one and full of details the difficulty is intensified. Dr. Symes' *Bacteriology of Every-Day Practice* is intended to assist those who passed through their professional curriculum before bacteriology had taken a recognised place as a subject of instruction. How well it is adapted to carry out this intention may be realised when we state that in a space of less than one hundred pages there has been found room for chapters on materials and instruments, the preparation and staining of films, general infections of the blood, including malaria, relapsing fever, and plague; suppurative processes (with special treatment of endocarditis, puerperal fever, erysipelas, tubercular suppurations, &c.), diseases of the respiratory system, enteric fever, cholera, &c. Even this does not complete the list, as space is found for paragraphs on *post-mortem* examinations from a bacteriological standpoint, serum therapeutics, lumbar puncture, and the microscopical detection of certain parasites, whilst at the end is an appendix on the microscope by Dr. D. S. Davies, which gives just the information for lack of which money is so often wasted in the purchase of an unsatisfactory microscope.

Slips there are here and there, but these are unavoidable in a first edition, and we have not anywhere noticed a mistake of a serious nature. Any criticism we would offer would be in matters of detail, such for instance as the statement on page 17 that blood films should be prepared by "squeezing" two coverglasses together, that the fixing of films is brought about by the "coagulation" of the albumin, and that "Gram covers" should be stained in anilin gentian violet for "five minutes." We think, also, that the instructions given for fixing films in the flame are insufficient. In the section on the microscope, too, we should say that the oil immersion objectives supplied by the English makers named, with the possible exception of those of Swift, are altogether inferior to the Continental glasses. English makers seem entirely unable to make a really good lens at a reasonable price, and in cases where the definition is fairly satisfactory the working distance is absurdly short. We are rather surprised not to find some mention made of the achromatic condenser. It is somewhat expensive, but for accurate work it possesses great advantages over the ordinary Abbe. But after all these are details; the more important sections of the book are excellent, and we think that the paragraphs on serum therapeutics are likely to be particularly useful in preventing the indiscriminate administration of serum in suitable and unsuitable cases alike, which has greatly tended to throw discredit upon the whole system. One great advantage of the book is its small size; larger text-books on bacteriology and on diagnosis we have in plenty. This is essentially a "handy" book, and can be read through in an hour, whilst, when the necessity arises, information upon any point can be found immediately.

A Text-Book of Histology, including Microscopic Technic. By A. A. Böhm, M.D., and M. von Davidoff, M.D. Edited by G. Carl Huber, M.D. Authorised Translation from the Second Revised German Edition, by Herbert H. Cushing, M.D. Pp. 501. London and Philadelphia: W. B. Saunders & Co. 1900.—This is a translation of a well-known German text-book into the American language, and the title of an English paper that has been added to the bibliography had to be Americanised before it could be included in this work; but even after making full allowance for differences of idiom, the translation leaves something to be desired. Another sign of its American origin is shown by the fact that the editor only vaguely indicates in the preface those places in which "additions to the German text have been freely made"; but perhaps we are unduly sensitive about such little things on this side of the water. Dr. Huber, however, has added a large number of illustrations to the book, most of which were much needed. These he has not omitted to acknowledge. The most

valuable additions to the text are those concerning the innervation of various organs and tissues, a branch of histology to which Dr. Huber has paid much attention. There has been little attempt to adapt the book to the use of English teachers of physiology, and we are afraid that this edition will do little to popularise Böhm and Davidoff as an English text-book. Among instances of loose translation, others of which have been noticed, we may mention that of the word "Verbreitung," p. 269 (*Technic*, 224), which is rendered "distribution." The word "demonstration" would have been correct, and would have made sense, which "distribution" does not. Again, on p. 73 (*Technic*, 125) the word "demonstration" should have been used, not "formation," in translating "Darstellung." The word "formation" completely alters the sense.

Manual of Physiology. By G. N. STEWART, M.D. Fourth Edition. Pp. 894. London: Baillière, Tindall and Cox. 1900.—The first edition of this text-book of physiology appeared in 1895, and already it has become one of the most popular. It covers all that is needed for any English examination, and is brought out at a reasonable price—two not unimportant points when a student is selecting his text-book. But its popularity rests also on other grounds: it is written in a very readable style and in a manner that appeals to the memory; moreover, the author does not assume that the student has his physics and chemistry at his fingers' ends, and frequently digresses to give a *resumé* that does not strictly belong to physiology, but which is essential to comprehension of the subject. The chief additions to this edition are a table for testing solutions of the more common proteids and carbo-hydrates, also those to the section on the nervous system, and generally the book has been brought up to date. We have noticed a few slight errors that need correction in the next edition. Several of the page references in the practical exercises on the first chapter are incorrect: the proportions of the ingredients in A.C.E. mixture are given as equal parts, and the fractions for the conversion of Fahrenheit and centigrade scales are transposed in the appendix.

Golden Rules of Physiology. By I. WALKER HALL, M.B., and J. ACWORTH MENZIES, M.B. Pp. 80. Bristol: John Wright & Co. [1900.]—We are quite at a loss to understand why such books as this are written. Perhaps it is an attempt to imitate the modern system of medication by means of tabloids, tablets, *et hoc genus omne*. But just as some pills become exceedingly hard when compressed, so the elements of a science become indigestible when too much condensed; and statements which, were space allowed for explanation, would appear correct, can only result in producing an altogether misleading impression when sent naked into the world. The book before us abounds with such statements, and our sincere advice

to every student is—"*Avoid it, at all events until you have passed your examination.*"

On Some Cirrhoses of the Liver. By WILLIAM BUTLER CHEADLE, M.D. Pp. viii., 109. London: Smith, Elder & Co. 1900.—This book, which comprises the Lumleian Lectures for 1900, expresses the views of an observant physician of experience upon the varieties of cirrhosis. A remark is made which many of us no doubt may have found to be true. He states: "It is surprising how a definite observation, stated with authority, holds sway, and its general application remains unquestioned, as all-comprehensive, without further examination or enquiry." As an illustration of this statement, he instances the influence exerted by the opinions of Laennec, and the description of a variety of cirrhosis by Hanot. Dr. Cheadle disbelieves, and all pathologists of experience no doubt now would agree with him, that the atrophic form of cirrhosis never follows the larger variety. He also thinks that Hanot's cirrhosis, if it exists at all, must be very rare. He has never met with a case, although he has looked carefully for an example for sixteen years. In the comments on the possibility of hypertrophic cirrhosis contracting down into the atrophic form, no reference is made to Graham Steell's suggestion that an enlarged liver due to congestion, associated with alcoholic cardiac failure, may not uncommonly be mistaken for a large cirrhotic liver. Such livers Dr. Steell has seen diminish in size as the condition of the heart improved under rest in hospital. The common association of a large fatty liver with alcoholism appears to have been overlooked. Its presence has a bearing upon several points referred to, of greater importance than that to which reference has just been made. Small though the book is, the numerous features of interest of which it speaks cannot be touched upon in a short review. Such facts as these, however, may be worthy of mention: in eight cases of jaundice, associated with cirrhosis, four were in the atrophic form, four in the hypertrophic. Dr. Cheadle has met with two cases of cirrhosis apparently due to obstruction of the common bile duct by gallstones, a pathological sequence for a long time considered doubtful in the human being. Of eight cases of cirrhosis in children, in two there was a history of congenital syphilis, in two of alcoholism, and in four no cause could be made out. Other points, clinically more important, such as the question of prognosis and of treatment, we must leave our readers to find for themselves in the lectures.

The Johns Hopkins Hospital Reports. Vol. VIII., Nos. 3—9. Baltimore: The Johns Hopkins Press. 1900.—The high character of the work associated with the Johns Hopkins Hospital is fully maintained in the present volume of reports, which deals exclusively with enteric fever in its medical,

surgical, and bacteriological aspects. Space will only permit of notice of a few of the articles contained in the volume, but all give evidence of laborious research, and will well repay study. Thayer's "Observations on the Blood in Typhoid Fever" will long be regarded as a standard for reference. Of especial interest is his observation that by carefully watching the leucocyte count it is possible to diagnose a pre-perforative stage of intestinal ulceration; and in further articles both Finney and Cushing confirm this observation, and urge that this is the period at which operative procedures may be undertaken with the greatest prospect of success. We note that Thayer still retains the objectionable term "*neutrophile*" leucocyte. Young's report of a case of chronic cystitis of seven years' duration due to the typhoid bacillus is clear and convincing, but from Dobbin's report on a case of puerperal infection with the bacillus typhosus it does not seem to us at all clear that this organism played any part in the causation of the disease. Osler's analysis and general summary of the 829 cases of enteric fever admitted to the hospital during the period 1889—1897, is a most valuable addition to the bibliography of the disease, and one which will constantly be consulted by clinicians in the future. In reading through the volume, one cannot fail to be struck with the freshness of methods of research and the originality of thought that marks throughout the work of the various authors.

Transactions of the Association of American Physicians. Vol. XV. Philadelphia: Printed for the Association. 1900.—Of the many interesting papers here collected, that by Dr. Trudeau, of Saranac Lake, N.Y., on the Sanitarium treatment of incipient pulmonary tuberculosis, is of especial use at the present time, inasmuch as it gives the results which have been obtained in the Adirondack Cottage Sanitarium, one of the pioneer institutions of America, both by the ordinary method and by the exhibition of tuberculin. The statistics do not give any very decided difference between a series of 50 treated by tuberculin and those not so treated, and Dr. Trudeau remarks that "the immunising effect of tuberculin as observed in the human subject would appear to be more uncertain both as to degree and duration, and immunity is still the unattained goal of experimental research." The Sanitarium treatment gives a general result of 72 per cent. discharged apparently cured.

Transactions of the Royal Academy of Medicine in Ireland. Vol. XVIII. Dublin: Fannin and Co., Ltd. 1900.—It is impossible to review adequately such a volume as this, which contains within itself the collected work of the leaders in Ireland of the various branches of medicine, surgery, obstetrics, pathology, state medicine, anatomy and physiology. There are two papers on "Epidemic Cerebro-Spinal Meningitis," a subject to which we have given some attention of late. "The disease

was first recognised in Ireland in 1846. Again, in the autumn and winter of 1866-67 a very considerable outbreak occurred here, and also in 1885-86 a minor epidemic appeared . . . . . It appears that we have entered on another epidemic of this disease in Dublin." Numerous cases are reported shewing the characteristic features of the disease, its bacteriology, and the use of the lumbar puncture and Kernig's sign in diagnosis.

The Medical Annual. Bristol: John Wright and Co. 1901.—This compendium of everything useful, with a minimum of literary padding and a maximum of pages of the advertisement type, is in its nineteenth year. During this period it has had many and cosmopolitan contributors, but the list varies much from year to year, and the publishers have shown a wise selection in their choice. Part I., "The Dictionary of New Remedies," is, as before, by Dr. William Murrell, and it contains the latest information on antitoxins and the various forms of serum. The same author contributes a paper on "The Light Treatment in Lupus and Allied Conditions. Part II., "The Dictionary of New Treatment," the major part of the volume, consists of 506 pages by many authors, one of the most distinguished being Dr. H. P. Loomis, of New York, whose article on "Phthisis" commences with the remark that "the salient feature of the year in pulmonary tuberculosis might be said to be the interest evinced everywhere in the open-air treatment for the patient as distinct from the serum treatment or germicidal attempt upon the bacillus, the building up and strengthening of the fortress by means of Nature's remedies rather than the arrest of the invading foe by drugs and antitoxins." An article by Professor Charles Ruata, of Perugia, on "Tuberculosis," advocates the constant inhalations of antiseptic volatile substances—"the compounds of *creasote*, mixed with *volatile oils* and *chloroform*, or *formalin*, conveniently diluted with alcohol and a little chloroform to make it bearable, give excellent results," whereas he maintains that remedies given by the mouth are useless, and that no serum has been found to have the least power. Numerous articles comprised under the heading of "Ophthalmology" are of local origin, having been written by Mr. F. Richardson Cross. Part III., "Miscellaneous," contains much useful information on sanitary science, legal decisions affecting medical men and public health, a review of new inventions, and pharmaceutical and dietetic articles, books of the year, lunatic and idiot asylums, homes for inebriates in Great Britain and Ireland, Invalids' Homes, nursing institutions and associations, and various directories, including an index to life assurance offices. Clearly the publishers have succeeded in making the book useful to every medical man, who should keep it constantly within reach for consultation in all difficulties.

Editorial Notes.

The Queen Victoria Jubilee Convalescent Home.—The first report of this institution, from which extracts were made in our last number (p. 83), has since been widely circulated amongst the subscribers to the fund. It was not possible to send it to all, inasmuch as there were a large number of contributors whose names are not known; but to all those who contributed the sum of £50 and upwards a copy of the report was forwarded. On perusal of the list of the officers and governors, it will be seen that the president (Sir Edward Payson Wills, K.C.B.) with the vice-presidents (Joseph Storrs Fry and Edward Robinson), and the honorary treasurer (Philip Henry Vaughan), may well feel that they have a very representative and experienced staff of governors, who are not likely to be lacking in judgment or care in their management of the institution. The treasurer is most anxious that the full number of beds which the Home will accommodate may be in due time filled, in order that the hospitals may be able to have the full complement of sixty-five beds which was at first proposed, and further that the remaining fifteen beds may be free of charge to suitable patients who have not been admitted from the institutions. It was arranged that for the first year the number of free beds in use by the Bristol Royal Infirmary and the Bristol General Hospital should not exceed twenty-one to each, and the wisdom of this course was shown by the fact that the year closed with a very small balance in hand, the expenditure having been a little over £2,000. The investments are now valued at £70,731, and the income will approximate a sum exceeding £2,500. The treasurer's proposal to increase the endowment fund by a further sum of £30,000 is now before the Bristol citizens, and the governors of the Home are gratified at the adoption by the Lord Mayor of this scheme at the meeting held in the Guildhall on April 26th, 1901, when the following resolution was adopted :—

"That the Lord Mayor be requested to issue an appeal for donations to the Queen Victoria National Memorial, and to a local fund towards completing the endowment of the Queen Victoria Jubilee Convalescent Home."

It was afterwards resolved :—"That the amount subscribed shall be divided between the two funds as follows : one-third of the whole shall be sent to the Lord Mayor of London's fund, and two-thirds be given to the endowment fund of the Convalescent Home, unless specially allocated by the donors."

A General Committee has been appointed to carry these resolutions into effect, and an appeal has been circulated among the citizens, of which the following quotation forms a part :—

"The citizens of Bristol have already expressed their loyal reverence for her late Majesty in the memorial raised for the Diamond Jubilee in the establishment of the Convalescent Home. But a national memorial is so obviously fitting, that I venture to ask that the city of Bristol takes its full share in securing one worthy of our late illustrious monarch. I also feel confident that my fellow-citizens will accord the same hearty acceptance which the town's meeting gave to the proposition to complete the endowment of the Convalescent Home. The amount necessary for these two purposes should not be less than £15,000, and I hope to have the pleasure of publishing the first list of donations on May 24th, Queen Victoria's birthday. An early reply on annexed form will much oblige."

* * * * *

Winsley Sanatorium for Consumptives.—Several meetings have been held in the Wiltshire district of the three counties. That at Bath on March 6th, under the presidency of the Mayor (Mr. T. B. Silcock), was addressed by Sir James Crichton Browne, Dr. E. J. Cave, Dr. W. H. Symons, Dr. Lionel Weatherly, and the Rev. Canon Quirk; at Bradford-on-Avon, on March 11th, Dr. W. H. Symons was the principal speaker; at Devizes, on the 27th, Dr. Watson Williams and Dr. Weatherly were the chief speakers; at Trowbridge, on April 3rd, an address was given by Dr. Shingleton Smith; and later still, at Calne, Drs. Weatherly and Michell Clarke spoke on the subject. These meetings have been well attended, and much information has been disseminated. A large meeting was also held recently at Weston-super-Mare, at which Dr. Robert Maguire gave an interesting address. Some lantern slides illustrating the site of the sanatorium were shown by Dr. Weatherly. We congratulate the Hon. Sec. for Weston, Dr. Ballance, on the large and representative gathering present.

We are indebted to Dr. Weatherly for the following description of the site and the proposed building:—"By all who are conversant with the needs as to site and situation of a sanatorium for consumptives, the land chosen by the committee at Winsley has been thought to be *ideal*, and then added to this we have the fact of its being in the centre of the three counties, and with capital railway communication for all parts of these counties. The committee consider themselves very fortunate in having been able to secure so admirable a position upon which to erect their sanatorium. The parish of Winsley contains the hamlets of Murhill, Conkwell and Turley. Conkwell, which stands on the border of Wilts and Somerset, is a most interesting little place. Like Petra of old, it stands in a cleft of the rocks, and is said to exhibit greater marks of antiquity than almost any other cluster

THE PROPOSED WINSLEY SANATORIUM FOR CONSUMPTIVES.

of houses in the kingdom. Its sylvan scenery is very lovely. Murhill Quarry, in which the sanatorium will be built, has a most beautiful outlook over the Wiltshire Downs, with the White Horse at Westbury very distinctly visible. The pretty river Avon, the Avon and Kennet Canal, and the railway, help to keep the scene full of life, and, to my thinking, greatly enhance the value of the situation for the purposes required. The parish of Winsley has for generations been noted for its salubrity. The sanatorium, the plans of which are being prepared by Messrs. Silcock and Reay, architects, of Bath, will be much on the lines of that splendidly-arranged institution, Hohenhonef, which, as many know, is situated on the Siebengebirge, overlooking Roland's Ecke on the Rhine. It will be seen that the building has two wings diverging at a somewhat open angle, and this will afford great protection from the east and west; while the high banks of the Quarry, some of which are already well wooded, will protect it still further, and the rising ground behind shelters it from the north. The woods on the estate are very pretty, and already lovely walks are practically made, and with much tree-planting on the land, there can be no doubt the surroundings of this sanatorium will be hard to beat in this or any other country." A more detailed description of the plans of the building are given on page 187, under the head of "Local Notes."

* * * * *

The British Congress on Tuberculosis, which is to be held in London, will sit from July 22nd to the 26th. It is another evidence of the earnest desire to devise more effectual means of coping with tuberculosis, and to at least place it in the same category as cholera, typhus fever, and small-pox, which, though not abolished, are no longer national scourges. Much useful work will be done in the various sections, which will deal with such questions as notification, control of milk and meat supplies, and the provision of sanatoria, climatology, pathology, bacteriology, and statistics. But not the least interesting features of the Congress will be the addresses by Koch of Berlin, Brouardel of Paris, and McFadyean of our own Royal Veterinary College. The subscription for membership of the Congress is £1, and any of our readers wishing to attend should forward that amount to the Secretary-General, 20 Hanover Square, W.

* * * * *

Organo-therapy.—It is high time that the revival of the long-discarded practices of the past in relation to the medicinal uses of animal products should receive a vigorous protest. The editor of the *Practitioner* (April, 1901) has done well in devoting the number to a review of what has been and is being done in organo-therapy. No one can deny that the therapeutic uses

of thyroid extract are such as to justify the statement of Dr. George R. Murray that its introduction into rational medicine is one of the most solid triumphs of modern science; but the enthusiast has expected great things from it in many other conditions than myxœdema, and in most of these he has been grievously disappointed. If thyroid extract has been for the most part a failure, how much more so are the numerous preparations of animal substances which every manufacturer now provides for the doctor and his patients? Almost every organ and tissue is converted into powder, tabloid, palatinoid, pill, or extract, and each preparation is credited with certain and often miraculous virtues. Well may we wonder whether the druggist and those who use his wares have not all joined the faith-cure brigade. The medico-literary causerie on organo-therapy in antiquity naturally raises the question whether the (*Ibid.*, p. 420) *Natural History* of Pliny the Elder is to be one of the text-books of the twentieth century. The ancients left nothing untried in organ and excrement therapy. We are fast following the example set by them in this matter. Mr. Malcolm Morris remarks that we are making steady progress in the spirit of the apostolic precept, "Try all things."

Notes on Preparations for the Sick.

Carnos.—CARNOS, LIMITED, Great Grimsby.—Carnos and Carnos Invalid Extract are fluid preparations of meat, of high sp. gravity, which when diluted leave no sediment, and may be prepared hot or cold, making a valuable and palatable drink either for winter or summer. Carnos is put up in pocket flasks with screw stopper and metal cup, in a form suitable for cyclists and tourists. The clear solution remains fairly clear on boiling, but gives a copious preciptate with picric acid. Its analysis shows that it contains a high percentage of albuminoid and carbo-hydrate nourishment. It has been partially peptonised in the course of manufacture, and is therefore a soluble and easily assimilated preparation which requires no further digestion.

Tabloids.—BURROUGHS, WELLCOME & Co., London.—The supply of tabloids never fails, and is capable of indefinite variation. One of the most useful is the latest we have received:—

Codeine and Nux Vomica.—One grain of the former with a quarter grain of the latter extract. The combination is one which must at times be of use to the diabetic, and in cases of phthisis a dose at bedtime is of great service.

Iron Citrate Compound.—This tabloid contains three grains of citrate of iron and ammonia, with one grain of sulphate of quinine and one-sixtieth of arsenious acid. It is a good combination which must have a wide range of utility.

Ergotin. (Extract of Ergot, B.P.) gr. j.—This tabloid is, like the others, sugar-coated, and is made from a reliable preparation. Wherever Ergot is likely to be needed, the tabloid will be a convenient form for its presentation.

Beta-Naphthol Compound.—Its formula is as follows:—

Beta-Naphthol	gr. j.
Wood Charcoal	gr. iv.
Oil of Peppermint	$m\frac{1}{2}$.

The combination should be of use in cases of gastric fermentation, and wherever gastric and intestinal antiseptics are likely to be useful.

Benzoic Acid Compound.—This tabloid is a compound of benzoic acid, codeine, menthol, ipecacuanha, cocaine, and red gum, which should give relief in cases of relaxed and irritable sore-throats.

Ammonol.—Ammonol Chemical Co., New York.—Amongst the numerous coal-tar derivatives in use a product of the amido-benzene series, called Ammonol, seems to deserve a more extended use as an antipyretic and analgesic. As it contains ammonia it is not likely to give rise to cardiac depression. It is put up in tablet form in many combinations, and has a considerable range of utility, including influenza and dysmenorrhœa.

Phenalgin.—Etna Chemical Co., New York.—This drug—ammonio-phenylacetamide—in doses of $2\frac{1}{2}$ to 10 grains, easily taken in five grain capsules or in $2\frac{1}{2}$ grain tablets, and repeated every half-hour, is especially recommended for cases of painful menstruation. For headache and other neuroses it is often of much service.

Vasogen.—E. J. Reid, 11 Dunedin House, Basinghall Street, London, E.C.—A series of these preparations has been forwarded. Since 1893 it has been coming into use as a solvent for various drugs, which when applied to the skin becomes readily absorbed and may be found in the urine. The vasogen ointment base will take up more than 1,000 per cent. of water, and most drugs can be readily incorporated with it by trituration in a mortar without heat or any other oleaginous mixture. Compounds with creasote 20%, iodine 10%, iodoform 3%, sulphur 30%, and mercury 50%, appear to be especially useful. These compounds are manufactured by the Vasogenfabrik Pearson & Co., of Hamburg.

Obituary.

JAMES WILDING, whose death took place a short time ago at his house in Fremantle Road, Bristol, was born at Liverpool in June, 1860, and was consequently in his 41st year. He received his medical education at the Westminster Hospital and Newcastle-on-Tyne. He took the degree of M.B. Durham in 1886 and the M.D. two years later; he had taken the diploma of L.S.A. in 1884, and those of M.R.C.S., L.R.C.P., in 1885. After two years' service at sea on board the ss. *Lord Gough* he settled in Bristol, and was appointed Surgeon to the Foresters' Medical Institution, which post he held for thirteen years till his death. Dr. Wilding contributed several papers to the medical journals, but the calls of a large practice prevented his having much time for such work. He was a very able practitioner, and enjoyed the esteem and confidence of his patients in a very marked degree, as indeed he well deserved to do, for he spared no pains in the care of his patients, and was unwearied in his devotion to all of them—to the poorest as well as to those who were better off. His loss will be deeply felt by a large circle of friends and patients who held him in high esteem. Seven years ago he suffered from an attack of acute rheumatism which damaged his heart, and on a second attack supervening complicated with pericarditis and pneumonia he passed away after a fortnight's illness. Only recently he had been appointed on a Sub-Committee of the Bath and Bristol Branch of the British Medical Association to consider the question of wage limit, a matter on which he was well qualified to speak, but his illness and death prevented the Committee from availing themselves of his assistance. He leaves a widow, but their only child died a few years ago.

Mr. THOMAS COOMBER, F.I.C., F.C.S., who died at his residence, 52 Clarendon Road, on May 21st, 1901, had been connected with the Bristol Medical School and University College as Lecturer on Chemistry for a period of nearly thirty years, as he was elected in 1868, and resigned his office in 1896. He was a very successful teacher in the Bristol Trade and Mining School, and when he resigned the Headmastership of the Merchant Venturers' School, about ten years ago, a handsome presentation of silver was made to him. His colleagues in the medical department were grateful for the energetic and useful part which he took in the early foundation of the University College in Bristol.

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

March 13th, 1901.

Dr. D. S. DAVIES, President, in the Chair.

Dr. MICHELL CLARKE showed the following pathological specimens: (1) Sections of the brain obtained from a case of tumour of the right optic thalamus and crus cerebri. The sections showed the extent

and relations of the tumour. (2) Specimens obtained from a case of tumour of the right cerebral hemisphere involving the corpus callosum. The patient, a woman aged 31, had been shown to the Society some months previously. The tumour was a round-celled sarcoma. The symptoms had begun with Jacksonian epilepsy affecting the left side. There was no optic neuritis at that time. Twelve months later there was left hemi-paresis and slight optic neuritis. Operation was then declined. Three or four years from the onset of the disease she came to the Hospital again with more marked hemiplegia and almost complete loss of sight. It was decided to perform an exploratory operation. The patient unfortunately died from the shock and hemorrhage which attended the operation. (3) A specimen beautifully illustrating the lesion in that form of endemic dysentery or ulcerative colitis met with in this country.—Dr. Lacy Firth, referring to the second case mentioned above, stated that he had carried out the operation alluded to. A quadrilateral flap had been raised and a large piece of bone removed. Before operating a tourniquet had been applied round the head with the object of diminishing hemorrhage, but his impression was that the tourniquet had rather increased the hemorrhage than diminished it, in spite of the fact that it had been retightened after the first incision. The patient bore the operation well until near its completion, when her condition suddenly became critical. She lived about eight hours after the operation. Just before death she was transfused. During the transfusion she had a generalised epileptiform fit, and then stopped breathing from paralysis of the respiratory centre. The dura mater was incised as a last resort to relieve intracranial tension, but without benefit.

Dr. T. Fisher, whose paper we shall print in full in a later issue, showed a series of sketches and diagrams of displaced abdominal organs. They illustrated the following conditions: (1) Traumatic diaphragmatic hernia, taken from the case of a man who had been squeezed between the foot-board of a train and a station platform. The stomach and part of the transverse colon had entered the left side of the thoracic cavity through the œsophageal and aortic openings, which had been ruptured into one aperture. (2) Congenital diaphragmatic hernia in a child seven months old. The usual attachment of the external arched ligament was absent on the left side, and through the gap all the intestines between the third part of the duodenum and the descending colon had passed into the left side of the thoracic cavity. The stomach had remained in the abdomen. (3) The cæcum attached to the lumbar vertebræ below the duodenum, from a man aged 38. The appendix, directed upwards and to the right, reached the costal margin. (4) A cæcum with a long meso-cæcum lying on the anterior surface of a slightly enlarged liver, from a woman aged 35. The cæcum could be placed in the left iliac fossa. (5) The transverse colon and part of the stomach turned upwards and lying on the anterior surface of the liver, from a woman, aged 54, who died of carcinoma of the cæcum. (6) A transverse colon adherent to the back of the uterus, with the small intestine in front, from a case of subacute peritonitis in a woman of 29. (7) Acute dilatation of the stomach in a case of septicæmia, from a woman aged 36. The stomach reached the pubes and left iliac fossa. (9) A greatly dilated transverse colon, from a case of carcinoma of the sigmoid flexure. On first opening the abdomen nothing but this and the stomach adherent to it could be seen. (10) A diagram of Riedel's lobe of the liver taken from a man aged 46. This sketch had not been made from a *post-mortem* subject, though the speaker had twice met

with the abnormality in the *post-mortem* room. Though this was not an illustration of a displaced viscus, it was a condition which had been frequently mistaken for movable kidney.—Dr. JAMES SWAIN commented upon the importance of some of the conditions which had been illustrated. Riedel's lobe was most apt to be mistaken for a distended gall-bladder.—Mr. C. A. MORTON commented upon the V-shaped colon and the adhesions which had caused it.—Dr. MICHELL CLARKE remarked that he had often seen a V-shaped colon, and asked what had been the physical signs in the case of congenital diaphragmatic hernia.—Mr. CARWARDINE stated that he had seen a laparotomy performed for what proved to be Riedel's lobe of the liver. He had seen the lobe also in a liver he had operated upon for a hydatid cyst. He alluded also to a case in which the cæcum had been found on the left side of the abdomen.

Mr. C. A. MORTON read notes of a case of successful operation for diffuse peritonitis from perforation of the appendix vermiformis. He remarked that cases had been described as examples of general peritonitis in which there had been no evidence that inflammation was general throughout the peritoneum. His own case was an example of diffused peritonitis, and probably the inflammation had not spread to the diaphragm. The case appeared to teach that cases of appendicitis, especially if recurrent often, could not be safely left for operation until a quiescent interval was reached. The patient, a man of forty-four years of age, awoke one morning with some abdominal pain. This became severe on a railway journey to Bristol. Mr. Morton had seen him a few hours later, and found him with a pulse of 80, a temperature of 100°, rigidity of the right side of the abdomen, and tenderness at a point over the right iliac fossa to the inner side of the iliac spine. This was on December 4th. There was a history of three previous similar attacks, the last one having been in October. It was thought the case might be safely watched. On the next day the pain had spread to the left of the abdomen, and there was slight abdominal distension, but no vomiting. Forty-eight hours after the onset there was more general tenderness, and the abdominal movements of respiration had stopped; operation was then decided upon. Pus was found beneath the cæcum, apparently confined there only by the pressure of distended coils of intestine. A large quantity of thick pus was found in the pelvis. The appendix was almost free from adhesions, and was removed. The exposed intestine was very red, and had flakes of lymph adherent to it. Three drainage tubes were inserted in different directions. These were removed in five days. Ten days after the operation the patient was able to take solid food. The sinus left gradually closed. Commenting on this case, Mr. Morton said that some members of the profession did not realise how dangerous recurrent cases of appendicitis often were. In such cases, even with the pulse only slightly accelerated, with little distension, and with no vomiting, it might be dangerous to put off operation.—Distension of the abdomen does not prove that a peritonitis is general. Dr. JAMES SWAIN remarked that the term "spreading peritonitis" was a suitable one for those cases of peritonitis starting from a definite focus like the appendix, and that a true general peritonitis rarely resulted. During the period when the inflammation was spreading an operation might cure the patient. If the irrigation treatment was used a spreading peritonitis might be generalised. He considered that in appendicitis each case should be treated on its own merits, and he would wait for the quiescent period before operating in any case in which it appeared likely that the patient would get over the acute

attack.—Dr. WATSON WILLIAMS alluded to the difficulty there was in deciding whether a case was one of diffuse or general peritonitis, and whether, in the severest cases, an operation afforded hope or was hopeless.—Mr. PAUL BUSH agreed that the "flushing-out" treatment of peritonitis often spread the disease, and believed that patients had been killed by it. He advocated thorough sponging and free drainage. —Mr. LACE asked if Mr. Bush was averse to irrigation in general peritonitis. He had been in the habit, if he found pus around the appendix and in the pelvis, of making an incision above the umbilicus, and, if he found peritonitis there, of irrigating.—Mr. CARWARDINE pointed out that general peritonitis involved the under-surface of the diaphragm, and the region behind the stomach, and the lesser sac of the peritoneum, and that the term should not be used unless these parts were involved. He alluded to the method of turning out the intestines and thoroughly cleansing them in that way.—Mr. W. H. HARSANT said he would be sorry to lay down the rule that the method of irrigation should never be used. A general rule against the practice should not be made, but each case judged on its merits. It was certain that flushing was now less practised than formerly.—Dr. W. C. SWAYNE mentioned a case in which a woman had died six months after confinement from rupture of an abscess from the peritoneum into the lung through the diaphragm, and in which a score of pockets of pus was found amongst the intestines. He would be disposed to irrigate in such a case, and had, in fact, done so in two cases, though unsuccessfully. Irrigation was the only possible way of dealing with such cases. In some the whole peritoneal cavity became affected in twenty-four hours.—Mr. MORTON referred to the presence of rectal tenesmus in some cases. In the very severe cases operation was almost hopeless. He agreed with Mr. Lace upon the advisability of making a second incision at a distance from the appendix region. Some remarkable recoveries had followed the treatment by turning out the intestine and then cleansing the peritoneum.

Dr. BERTRAM ROGERS read notes on a case of acute pemphigus in which Demme's diplococcus had been found by Dr. Neild. The patient was a child. The illness had begun with a sore throat. The tonsils and uvula had a sloughy appearance. Diphtheria antitoxin had been used. Numerous blisters—thirty or forty—formed on different parts of the body. The child died with broncho-pneumonia. —Dr. SYMES remarked that he had seen the case at the Hospital, and regarded it as one of septicæmia. He did not attach much importance to the organism obtained from surface blebs, and considered the examination of the blood more important. The eosinophile cells had been almost as numerous as the leucocytes. The question as to whether pemphigus was really a specific disease or not was alluded to.

April 10th, 1901.

Dr. D. S. DAVIES, President, in the Chair.

Mr. T. CARWARDINE showed a patient after operation for a large ventral hernia. It was explained that the patient had in the first instance been successfully operated upon for a ruptured liver, and that a ventral hernia had formed through the abdominal cicatrix. The operation for the relief of this condition had consisted in exposing the affected parts and suturing each of the layers of the abdominal wall accurately together where they had gaped. In this way the posterior layer of the rectus sheath, the rectus muscle itself, the anterior layer of its sheath, and the skin had been successively

sutured. About fifty buried and twenty superficial sutures had been used, and the operation took about an hour and twenty minutes. Lembert's sutures had been used for the anterior layer of the rectus sheath. The result now, many months after the operation, was a strong abdominal wall. A slight degree of atrophy of the upper part of the rectus muscle remained.—Dr. J. LACY FIRTH said that he remembered well seeing the large ventral hernia the patient had when he appeared before the Society after his recovery from the first operation. He had now examined him again, and considered the result obtained by the operation for the ventral hernia was a most excellent one. He asked if at the operation the old incisions had been opened up to their full extent, both the longitudinal one and the transverse, whether peritoneal adhesions had given any difficulty, what material had been used for the buried sutures, what material the operator generally preferred in operations for the cure of herniæ, and whether the opportunity had been taken to examine the scar in the liver, the result of its rupture. The rupture, as far as he remembered, had nearly completely separated the left lobe of the liver.—Mr. T. CARWARDINE replied that the old wounds had been completely re-opened; that the operation had practically and intentionally been an extra-peritoneal one, so that the liver could not be examined. Catgut had been used for the buried sutures, though, as a rule, he preferred silk for hernia cases. He was unable to see the advantage of using silver wire, as advocated by some.

Dr. WALTER C. SWAYNE read a paper on a series of cases of cœliotomy for diseases of the uterus and ovaries. The series included sixteen abdominal sections and five vaginal sections. The former group included one exploratory operation, one for puerperal peritonitis, five ovariotomies, four oöphorectomies, one salpingo-oöphorectomy, and four hysterectomies with retro-peritoneal treatment of the stump. The vaginal operations included three hysterectomies for malignant disease, one vaginal section for general peritonitis, and one vaginal fixation for retroversion. Five of the patients had died, including the cases of puerperal peritonitis. Two cases of abdominal hysterectomy died—one from hemorrhage, the other from intestinal obstruction. One vaginal hysterectomy died of pneumonia. During the last twelve months the Trendelenburg position had been used for all cases, and been found very advantageous. When the operation was a long one or attended with shock, as much boiled saline fluid as it would hold was poured into the abdominal cavity before tying the last stitch. In ovariotomy the proximal part of the ovarian artery was ligatured in the infundibulo-pelvic fold, and usually the cut ends of the artery were tied as well. Other details of technique were described. An account was then given of the various cases. One of the cases of hysterectomy vomited persistently for three days, and the patient's condition gave rise to some anxiety. All the unfavourable symptoms disappeared after washing out the stomach. The question as to the advisability of operating very soon after first seeing patients who were greatly weakened by malignant disease, or of deferring the operation until the patient's condition had been improved, was mentioned. There was more likelihood of dangerous shock and of sepsis and pneumonia if the operation was done immediately, and more likelihood of recurrence if it was delayed. The dilemma was most difficult. Allusion was made to the difficulty of keeping patients in the Trendelenburg position well clothed, so as to avoid shock. The value of strychnine injections, and of saline solution used as indicated above, were emphasised.—Mr. EWENS remarked upon the

great recuperative power some patients showed after laparotomy in bad cases, and instanced a case in which he had evacuated at least a gallon of pus from the abdominal cavity with a successful result, though the operation was performed in a cottage.—Mr. PAUL BUSH remarked on the two cases in which the abdomen had to be re-opened for hemorrhage. He had seen the washing out of the stomach act like magic in checking vomiting.—Dr. STACK asked whether amenorrhœa had followed in one of the cases mentioned.—Dr. LACY FIRTH was also interested in the case Dr. Stack had mentioned. It was the case in which a small portion only of one ovary had been left at the operation. The use of the word "peritonism" for a set of symptoms other than those of peritoneal shock, which Dr. Swayne had mentioned, seemed objectionable. Surgeons were often met with dilemmas such as that which had been alluded to in discussing the question of operating for malignant disease, and much judgment had to be used in deciding how to act.—Dr. WALTER SWAYNE replied that he believed the patient inquired about had continued to menstruate after the operation. "Chronic peritonism" was the term he had alluded to as being occasionally used to signify the condition of abdominal pain and distension, the result of peritoneal adhesions.

Mr. MUNRO SMITH read a paper written by Mr. A. W. Prichard, who was himself unavoidably absent, on some "operations undertaken for the closing of an artificial anus" (*see* p. 119).—Mr. T. CARWARDINE commented upon the excellent result of the treatment. There was now a great tendency to resect the gangrenous gut in these cases, and to immediately suture the divided parts. Statistics showed the results of this practice were much more favourable now than they used to be. A ten per cent. superiority in results was claimed by Americans when the Murphy button was used instead of sutures for joining the intestines, no doubt a result of the superior mechanical ingenuity of the American race.

Dr. STACK read notes of a case simulating plague. The patient, a man of twenty-three, was admitted to the Bristol Royal Infirmary under Dr. Shaw. The patient had previously attended as an out-patient for some weeks, suffering from plumbism. On January the 24th his face became very red and swollen, and he was delirious. Next day the swelling had spread to his neck, his mouth became very foul, and a red rash appeared on most of the body. The rash disappeared in about twenty-four hours. The patient then looked like a severe case of enteric fever in the third week. The temperature was 103°, respiration 32, and the pulse 100. There were signs of consolidation at the base of the right lung. The face and neck then peeled, and looked as if the patient had just had a severe attack of erysipelas. There were enlarged glands in the neck. On the sixth day after the face had first become swollen there was enlargement of the cervical, occipital, axillary, epitrochlear, and inguinal lymphatic glands, and they were tender. The man died eight days later. The temperature had remained high to the end, and there had been a gradual increase of prostration. Widal's reaction was negative. The blood and fluid obtained from the lymphatic glands produced no growth on agar tubes. A cover-slip preparation of a scraping from a lymphatic gland after death showed a short fat bacillus, which looked like a diplococcus owing to marked bi-polar staining. The case seemed to have been one of toxæmia, but the nature of the poison remained a clinical mystery.—The PRESIDENT said the case was one of considerable interest from a public health point of view. On January 20th a ship had come to Bristol upon which there were found

rats which had died from plague. Dr. Davies had been interested, therefore, in discovering whether the man could have had anything to do with this ship, but he had found nothing pointing to that. The absence of signs of peri-glandular swelling was unlike the classical description of a plague case. In the single plague case which occurred at Cardiff there had been an absence of this peri-glandular swelling. He had formed the opinion that the man was not suffering from plague. The final criterion must be the bacterial one. Unfortunately the bacterial test was not a simple one, just as it was not a simple one in the case of diphtheria or tubercle. There were organisms which might be confused with that of plague.—Prof. STANLEY KENT remarked that his introduction to the case was through an examination he had made of smears from the glands. In these he had found a stumpy bacillus which showed bi-polar staining. Cultures obtained from plague cases usually were pure, and showed the presence of the organisms in enormous numbers. He had failed to get any cultures from lymphatic gland substance in this case, but had obtained some from the spleen which were of a mixed character. In these cultures some of the organisms were like those of plague. Points against the bacillus being that of plague were the paucity in number of the organisms got from the lymphatic glands and the impossibility of making cultures of them. In favour of plague were the facts that the organism was contained in the glands, and that a pure culture had been obtainable from the spleen. An inoculated guinea-pig had failed to die. But occasionally in plague the poison was so attenuated that a large dose was required to kill a guinea-pig. Prof. Kent exhibited under the microscope specimens of the culture obtained from the spleen in the case of the typical bacillus pestis, and Dr. Stack's stained smears from the lymphatic glands.—Dr. FLETCHER, who had seen the plague cases recently in Glasgow, said that the worst cases there had not been diagnosed at first, but had been notified as typhoid cases with a big query. It was the doubtfulness of the diagnosis which had led the hospital doctors to specially examine them. They concluded they were plague cases. The onset of the disease was not characteristic. Most of the temperature charts showed a well-marked primary and secondary fever; the late fever was coincident with sloughing of the glands. In an average case the glands gave great pain, and there was much hardness and redness over them. The character of the growth in agar was against the case described having been one of plague. Gentian violet had been the stain found to act best in Glasgow. A bacillus was always well demonstrable. In agar to agar culture the bacillus became less in size. There had been ten deaths in eighteen cases. The collapsed appearance and the look as of impending death which the patients exhibited had been a striking feature in the cases. In some of the most severe cases the temperature had not been very high.—Dr. FISHER alluded to the suggestion that there had been some very mild cases of plague about which were easy to overlook.—Dr. STACK reiterated that the man's appearance at first was that of a patient who had had erysipelas. With regard to the rash, they had only the description of the man's wife to guide them.

May 8th, 1901.

Dr. D. S. DAVIES, President, in the Chair.

Dr. J. O. SYMES showed specimens of blood containing malarial organisms. They had been taken from a sailor who had his first

attack of ague at Glasgow, eighteen days after leaving Egypt and eight days after leaving the South of Spain. At the beginning he had attacks of ague every day for ten days. Then they ceased for ten days, but after that returned daily. The films showed two generations of tertian parasites, and a marked decrease of the white cells. When the blood was again examined four days after the last attack of ague it showed an increase of the white cells and the presence of myelocytes. The count was as follows:—

Finely granular leucocytes	52	per cent.
Eosinophile leucocytes...	3.6	,,
Myelocytes	8	,,
Eosinophyle myelocytes	·3	,,
Large hyaline cells	17	,,
Small lymphocytes	19	,,

The patient had been given grs. x. of quinine four times a day. The final attack of ague occurred after the second dose of quinine.

Dr. AUST LAWRENCE read a paper on "Some of the Hemorrhages of Pregnancy." (This paper we hope to publish in our next issue.)

Dr. BARCLAY BARON reported a case of paralysis of the right vocal cord in which the paralysis was the result of the pressure of a thoracic aneurysm, and showed skiagrams of the case. The patient, a man of fifty, had a piping voice and immobility of the right vocal cord on phonation. Also the left pupil was dilated and the left radial pulse was smaller than the right. There was a slight fulness above the right clavicle and the veins were rather enlarged there. Impaired percussion resonance was found over the upper three intercostal spaces on the right side, but no pulsation or bruit was detected. Over a limited area posteriorly, opposite the centre of the dull area in front, tubular breath sounds were heard. The fluorescent screen image and skiagrams, produced by Mr. James Taylor, showed the aorta projecting to the left of the spinal column, and a large dark shadow to the right; and on the screen distinct pulsation of these parts had been seen. The case taught the lesson that no patients should be allowed to go about with interference of function of the vocal organ without a laryngoscopic examination being made; otherwise such causes of the trouble as instanced above, and early stages of syphilitic or tubercular disease, or tumours, were likely to be overlooked.—Dr. MARKHAM SKERRITT remarked upon the successful use of skiagraphy in the case, and upon the difficulty there was in determining which blood-vessels or which parts of the vessels were primarily the seat of the disease in cases of aneurysm in the upper part of the thorax.—Dr. WATSON WILLIAMS thought this was one of the first, if not the first case in which the diagnosis of aneurysm, suggested by laryngoscopy, had been confirmed by skiagraphy. Laryngologists had frequently diagnosed aneurysm correctly, but confirmation had in the past to be waited for until other symptoms developed. He agreed as to the necessity of making a laryngoscopic examination in any case of hoarseness or vocal change.—Mr. W. H. HARSANT asked if the usual signs of aneurysm had been absent, so that diagnosis was impossible without a skiagram.—Mr. PAUL BUSH remarked on the perfection of the Röntgen ray demonstration of the nature of the case.—Dr. F. H. EDGEWORTH alluded to another case which he had seen in which abductor paralysis had been discovered in a patient attending the Bristol Royal Infirmary for eczema, and a skiagram had demonstrated the presence of a sacculated aneurysm.—Dr. K. WILLS asked if there had been any dysphagia.—Dr. BARON replied that there had been no dysphagia and

no pulsation, that the patient's voice was not hoarse but of a weak, high-pitched and "piping" character. The fluorescent screen had shown the aneurysm wonderfully well, even better than the skiagrams which had been handed round.

Dr. J. MICHELL CLARKE read a paper on "The Treatment of Inveterate Cases of Sciatica." The treatment he described was that advocated and perfected by Weir Mitchell. It consisted in immobilization of the affected limb by means of bandages and a Liston's long splint. The limb was first bandaged in flannel from the ankle to the groin, and then the splint applied. For three or four days the splint was left undisturbed. After that it was reapplied daily, to make it more comfortable for the patient. After six or seven days slight movements of the hip and knee were made daily when the splint was removed. The duration of this treatment with the splint depended upon the severity of the case, but was usually two or three weeks. It was left off first by day for a week, and then altogether. After another week the flannel bandage was left off. A few days later the patient was allowed to get up, but not to sit down at all when up. The bandage was left off at first by night, and then altogether. If pain returned on getting up, part of the treatment had to be repeated. The patients felt the treatment very irksome for the first two or three days, and might even require morphia. Careful attention to details was essential for success. Arsenic, quinine, iron, or cod-liver oil might be used as adjuvants. The average duration of the treatment was six or seven weeks. The speaker had been successful in curing ten cases of very severe or obstinate sciatica by this method, and had found it more successful than any other treatment for that class of case. He recommended blistering any remaining tender areas.—Mr. H. MOLE remarked that if the success of the splint treatment depended upon rest, a plaster-of-Paris splint might act as well as the Liston, and the patient be allowed up throughout.—Mr. W. H. HARSANT considered perfect rest was essential for the cure of acute sciatica. The treatment described was in its essence that by perfect rest. It was an application of Hilton's principle of rest to cure pain.—Dr. EDGEWORTH was not surprised to hear that the patients found this method of treatment irksome. A peculiar feature in sciatica was that the patient could not keep the leg in one position. It had been alleged that the cremasteric reflex was increased on the affected side, which pointed to the existence of irritation of the lumbar region of the cord. In acute cases he applied a big blister, and gave salicylates. He thought the blister was useful, and was positive that the effect of salicylates was powerful and beneficial in severe cases. In chronic cases, such as those met with in hospital out-patient practice, he believed that giving one-hundredth of a grain of phosphorus three times a day did more good than anything. He had found it cure a case in a week which had previously been very persistent. Application of the constant current was also beneficial after the method of Lewis Jones.—Mr. FLEMMING mentioned a case he had relieved by using a Liston's splint for ten days. He had not found the constant current of much use. He had met a practitioner who advocated blistering the foot. Possibly that acted by inducing rest.—Dr. ELLIOTT relied considerably upon salicylates and antipyrin. He thought the actual cautery also was useful.—Dr. BARON alluded to a case of frequently-recurring sciatica which a great many different drugs had failed to cure, but in which the Turkish bath, taken regularly, and the hot douche had given permanent relief.—Dr. PARKER commented upon the treatment by daily painting

the skin with concentrated hydrochloric acid over an area six or eight inches square. It rarely caused any injury to the skin.—Mr. HANCOCKE WATHEN alluded to the use of an ether spray and of tetrachlorate of carbon.—Dr. MICHELL CLARKE thought salophen a better drug for sciatica than salicylates. He did not think that a plaster-of-Paris splint would secure sufficiently perfect immoblisation if the patient was allowed up.

Dr. GEORGE PARKER read a paper on a case of "Congenital Obliteration of the Bile Ducts," and showed the specimen obtained from the case. The patient was a male child six months old. The mother was healthy. She gave no history of syphilis. She had suffered from dyspepsia during pregnancy. The meconium at birth was natural, and the stools were natural until the third week of life. Then vomiting began, and a few days later jaundice with white stools was noticed. At this time the infant appeared bright and lively, the jaundice apparently being the only ailment present. Later the abdomen became slightly distended. There was some skin irritation about the arms. It was admitted to the hospital. Death occurred suddenly six months after birth. A little ascites had been detected. The stools contained a little blood for a day or two, and they changed from white to a yellow colour in the course of the disease. The urine contained bile, albumen, and bile-stained casts. At the *post mortem* the liver was found to weigh 11½ oz., double the weight for a child of that age. It was olive-green in colour. The section-surface was smooth. There was a thickening of the fibrous tissue in the hilum. No calculi were present. On cutting into a dilated duct clear fluid was found and a black deposit on the duct wall. The spleen was enlarged, dark, and firm, and weighed 5 oz. The common bile duct could not be traced to the pancreas. There was a considerable mass of connective tissue around the vena porta. The contributions of Rolleston and Thompson to the literature of the subject were alluded to. About sixty cases had been recorded. Three had been operated upon. Treves had operated on one patient nineteen years of age with this affection. The infants usually died before they were eight months old. There were three theories as to the origin of the affection, viz.:—(1) That it was due to malformation (obliteration) of the bile ducts; (2) That a toxin set up cholangitis, which was followed by obliteration of the ducts; (3) That cirrhosis began in the liver and obliteration of the ducts followed. The first theory is disproved, because patent ducts had been found in some cases. Rolleston suggested that a toxin passed to the fœtus along the umbilical vein, setting up multilocular cirrhosis. Biliary cirrhosis followed, due to the poison passing to the liver through the hepatic artery and being excreted by the ducts. Why should obliteration of the ducts ensue in children and not in adults? Possibly because of the small size of the ducts in the former. Similarly laryngitis might more often produce stenosis in children than in adults. There was a good deal of evidence that the liver disease was prior to the duct disease. No definite change had been found in the bile. The disease had not been traced to alcohol.

J. LACY FIRTH.

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in March:

May 31st, 1901.

H. A. Benham, M.D. (1) ... ... 10 volumes.
J. Michell Clarke, M.D. (2) ... ... 2 ,,
W. R. Cossham, M.D. (3) ... ... 13 ,,
F. H. Edgeworth, M.B. (4) ... ... 6 ,,
The Faculty of Physicians and Surgeons of Glasgow (5) ... ... 2 ,,
L. M. Griffiths (6) ... ... 2 ,,
The Representatives of the late J. E. Prichard, M.B. (7) ... ... 185 ,,
Bertram M. H. Rogers, M.D. (8) .. .. 70 ,,
James Swain, M.D.... ... ... 19 ,,

Three framed pictures have been presented by Mr. Arthur W. Prichard, and unbound periodicals have been received from the Representatives of the late Dr. J. E. Prichard and from Dr. Shingleton Smith.

FORTIETH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Anæsthetics Committee, Report of the—British Medical Association 1900
Andrew, J. G. ... *Tubercular Disease of the Hip-joint*... 1901
Archambaud, P. *Traitement de la Coxalgie* 1901
Armstrong, J. ... *On Puerperal Fever* ... ... (3) 2nd Ed. 1819
Arnott, J. ... ... *Contributions to Practical Medicine and Surgery* ... (7) 1864
Atkinson, J. ... *Medical Bibliography (A. and B.)* ... ... (3) 1834
Auld, A. G. ... *Selected Researches in Pathology* 1901
Ayre, J. ... ... *On Disorders of the Liver* .. .. (3) 2nd Ed. 1821
Baillie, M.... ... *Morbid Anatomy* ... ... (3) 4th Ed. 1812
Barr, T. ... ... *Diseases of the Ear* ... ... 3rd Ed. 1901
Barton, J. K. ... *Records from General Practice* 1901
Basham, W. R.... *Aids to Diagnosis of Diseases of the Kidneys* ... ... (8) 1872
Belfield, H. M. Lyman, C. Fenger, H. W. Jones, and W. T. *The Practical Home Physician and Encyclopædia of Medicine* ... [N.D.]
Bell, Sir C. ... *The Nervous System of the Human Body* (7) 3rd Ed. 1844
Bellini, M. ... *La Résistance du Crâne* 1900
Bernheim, [H.] ... *De la Suggestion* ... ... (4) 1888
Berry, J. ... ... *Diseases of the Thyroid Gland* 1901
Billroth, T. ... *Surgical Pathology and Therapeutics* (Tr. by C. E. Hackley) ... ... (7) 1875
Binet et C. Féré, A. *Le Magnétisme animal* ... ... (4) 2e Éd. 1838

Bowman, B. B. Todd and W. *The Physiological Anatomy and Physiology of Man.* Parts II., III. ... ... (7) 1845
Bucknill, J. C. ... *Care of the Insane* .. .. (8) 1880
Burns, A. ... ... *Diseases of the Heart* ... ... (7) 1809
Catalogue of the Library of the Faculty of Physicians and Surgeons of Glasgow. 2 vols. ... ... (5) 1885–1901
Catalogue of the Library of the Royal Medical and Chirurgical Society of London ... ... (8) 1844
Chambers, T. K. *Lectures: Chiefly Clinical* ... . (8) [3rd Ed.] 1864
Chowry-Muthu, D. J. *Some Results of Sanatorium Treatment of Phthisis*... 1901
Copeland, T. ... *On the Rectum and Anus* ... ... (3) 3rd Ed. 1824
Corvisart, J. N.... *Diseases of the Heart* (Tr. by C. H. Hebb) ... .. (7) 1813
Crowther, B. ... *On White Swelling, &c.* ... ... New Ed. 1808
Curling, T. B. ... *Diseases of the Rectum* ... ... (8) 3rd Ed. 1863
Currie, J. ... ... *Medical Reports on the Effects of Water in Fever and other Diseases.* 2 vols. ... ... (7) 3rd Ed. 1804
Donkin, A. S. ... *Diabetes and Bright's Disease* ... ... (8) 1871
Duncan, A. (Jun.) *The Edinburgh New Dispensary* ... ... (7) 2nd Ed. 1804
Fenger, H. W. Jones, and W. T. Belfield, H. M. Lyman, C. *The Practical Home Physician and Encyclopædia of Medicine* (7) [N.D.]
Féré, A. Binet et C. *Le Magnétisme animal* ... ... (4) 2e Éd. 1838
Fischer, L. ... *Infant-feeding in its Relation to Health and Disease* ... 1901
Forel, A. ... ... *Der Hypnotismus* ... ... (4) 1889
Fox, R. H.... ... *William Hunter, Anatomist, Physician, Obstetrician* (1718-1783) 1901
Freyer, P. J. ... *Stricture of the Urethra* 1901
Garrod, A. B. ... *Materia Medica and Therapeutics* (Ed. by E. B. Baxter) ... ... (7) 7th Ed. 1879
Geddes and J. A. Thomson, P. *The Evolution of Sex* ... ... [3rd Ed.] 1898
Gee, S. ... ... *Auscultation and Percussion* ... ... (8) 1870
Golebiewski, E... *Diseases Caused by Accidents* (Tr. and Ed. by P. Bailey)... 1900
Grasset, J.... ... *Leçons sur deux Cas d'Hystérie* ... ... (2) 1890
Guthrie, G. J. ... *On Diseases and Injuries of Arteries* ... ... (3) 1830
Haden, C. T. ... *On the Colchicum Autumnale* 1820
Hammond, W. A. *Military Medical and Surgical Essays* ... ... (8) 1864
Hewer, Mrs. L.... *Our Baby* ... ... 7th Ed. 1901
Hewitt, G.... .. *Severe Vomiting during Pregnancy* ... ... (8) 1890
Higginbottom, J. *Additional Observations on the Nitrate of Silver* ... (7) 1850
Hime, T. W. ... *Practical Guide to the Public Health Acts* ... 2nd Ed. 1901
Howe, S. G. [et al.] *The Causes of Idiocy* ... ... (8) 1858
Hunter, W. ... *Pernicious Anæmia* 1901
Jones, H. M. ... *Practical Points in Gynæcology*... 1901
Jones, and W. T. Belfield, H. M. Lyman, C. Fenger, H. W. *The Practical Home Physician and Encyclopædia of Medicine* ... (7) [N.D.]
Kemp, W. ... ... *A Brief Treatise of the Pestilence* ... ... (6) 1665
Kennedy, R. H.... *Epidemic Cholera* ... ... (7) 2nd Ed. 1846
King, P. ... ... *Bath Waters* ... ... [N.D.]
Kourkine, E. Ossipow, I. Popow et P. *La Médecine du Zemstwo en Russie*... ... ... (1) 1900
Lambe, W. ... *On Scirrhous Tumours and Cancerous Ulcers* ... ... (7) 1809
Law, W. ... ... *On Derangement of the Digestive Organs* (3) 2nd Ed. 1829

Leftwich, R. W. *An Index of Symptoms* ... ... 2nd Ed. 1901
Lehmann, A. ... *Die Hypnose* ... ... (4) 1890
Lockwood, C. B. *Appendicitis* 1901
Loeb, J. ... ... *Comparative Physiology of the Brain and Comparative Psychology* 1901
Lugol, [J. G. A.] *On Iodine in Scrofulous Diseases* (Tr. by W. B. O'Shaughnessy) ... ... (7) 1831
Lyman, C. Fenger, H. W. Jones and W. T. Belfield, H. M. *The Practical Home Physician and Encyclopædia of Medicine* ... (7) [N.D.]
Maguire, R. ... *The Harveian Lectures on Pulmonary Tuberculosis* ... 1901
Martin, J. ... ... *De l'Atrophie du Nerf optique* ... ... (2) 1890
Martindale, and W. W. Westcott, W. *The Extra Pharmacopœia* 10th Ed. 1901
Martinet, [A. J. B.] Parent-Duchatelet et L. *Recherches sur l'Inflammation de l'Arachnoïde* ... ... (8) 1821
Monti, A. ... ... *Modern Pathology* (Tr. by J. J. Eyre) 1900
Moullin, C. M. ... *When to Operate in Inflammation of the Appendix* 2nd Ed. 1901
Orton, R. ... ... *On the Epidemic Cholera of India* ... ... (3) 2nd Ed. 1831
Ossipow, I. Popow et P. Kourkine, E. *La Médecine du Zemstwo en Russie* (1) 1900
Pamphlets. 3 vols. ... ... (7) [V.D.]
Parent-Duchatelet et L. Martinet, [A. J. B.] *Recherches sur l'Inflammation de l'Arachnoïde* ... ... (8) 1821
Parish Leech, The. *By a "Parish Doctor"* ... ... (6) 1870
Parkes, E. A. ... *On Urine* .. .. (8) 1860
Pharmacopœia in usum Nosocomii Londinensis Sancti Georgii ... ... (4) 1768
Philip, A. P. W. *On Febrile Diseases.* Vol. II. ... ... (7) 3rd Ed. 1813
Pilcher, G. ... *Diseases of the Ear* ... ... (7) 2nd Ed. 1842
Pitta, N. C ... *On the Influence of Climate on the Human Species* ... (7) 1812
Popow et P. Kourkine, E. Ossipow, I. *La Médecine du Zemstwo en Russie* (1) 1900
Porter, G. H. ... *Surgical Reports* ... ... (7) 1869
Questions (3,500) on Medical Subjects, arranged for Self-Examination 3rd Ed. 1901
Rabagliati, A. ... *Aphorisms, Definitions, Reflections, and Paradoxes* ... 1901
Richet, C. ... ... *Experimentelle Studien auf dem Gebiete der Gedankenübertragung.* (Deutsche Ausgabe von A. F. von Schrenck-Notzing) ... ... (4) 1891
Ridge, B. ... ... *Health and Disease* ... ... (8) 2nd Ed. 1859
Roberts, A. ... *The Use and Abuse of the Harrogate Mineral Waters* 3rd Ed. 1901
Santi, P. R. W. *Golden Rules of Aural and Nasal Practice* ... ... [1901]
Scherbakov, A. ... *Les Stations de Boues minérales de la Russie d'Europe* (1) 1897
Senn, N. ... ... *Principles of Surgery* ... ... 3rd Ed. 1901
Sewill, H. ... ... *Dental Surgery* (Ed. by W. J. England and J. S. Sewill) 4th Ed. 1901
Scudamore, C. ... *On Gout, Gravel, and Disorders of the Digestive Organs* (3) 4th Ed. 1823
Scudder, C. L. ... *The Treatment of Fractures* (assisted by F. J. Cotton) 2nd Ed. 1901
Sims, J. ... ... *Pathology of the Brain* .. .. (7) 1835
Spillan, D. ... ... *A Supplement to the London, Edinburgh and Dublin Pharmacopœias* ... ... (3) 1830
Thomson, P. Geddes and J. A. *The Evolution of Sex* ... [3rd Ed.] 1898
Todd and W Bowman, R. B. *The Physiological Anatomy and Physiology of Man.* Parts II., III. ... ... (7) 1845

Tubby, A. H. ... *Clinical Lectures on the Various Forms of Intra-Abdominal Suppuration* 1901
Turner, T. ... ... *A Practical Treatise on the Arterial System* 1825
Wardell, J. R. ... *Contributions to Pathology and the Practice of Medicine* (8) 1885
Watteville, A. de. *Medical Electricity* ... ... (8) 1878
Westcott, W. Martindale and W. W. *The Extra Pharmacopœia* 10th Ed. 1901
Wilde, W. R. ... *Aural Surgery* ... ... (7) 1853
Williams, P. W. *Diseases of the Upper Respiratory Tract* ... 4th Ed. 1901
Wood, W. ... ... *Cerebral Science* 1901
Yearsley, J. ... *Deafness Practically Illustrated*... ... ... (7) 4th Ed. 1854
Zavitziano, S. C. *Service des Enfants trouvés de Notre-Dame de Péra* ... [1901]

TRANSACTIONS, REPORTS, JOURNALS, &c.

American Dermatological Association, Transactions of the 1901
American Gynæcological and Obstetrical Journal, The ... Vol. XVII. 1900
American Journal of Obstetrics, The ... ... Vol. XLII. 1900
American Pediatric Society, Transactions of the ... ... Vol. XII. 1900
American Public Health Association, Reports and Papers of the Vol. XXVI. 1901
Archives de Neurologie ... ...2e Sér., Tomes IX., X. 1900
Archives of Pediatrics ... ... Vol. XVII. 1900
Archives provinciales de Chirurgie ... ... Tome IX. 1900
Bristol Medico-Chirurgical Journal, The ... ... Vol. XVIII. 1900
Bristol Port Sanitary District.—Annual Report of the Medical Officers of Health for 1900... 1901
British Journal of Dermatology ... ... Vol. XII. 1900
Canadian Practitioner and Review, The ... ... Vol. XXV. 1900
Centralblatt für innere Medicin 1900
Cincinnati Lancet-Clinic, The ... ... Vol. LXXXIV. 1900
Clinical Journal, The ... ... Vol. XVII. 1901
College of Physicians of Philadelphia, Transactions of the 3rd Ser., Vol XXII. 1900
Congrès (XIIIe) international de Médecine, Paris, 1900.—Comptes Rendus ... ... [Vols. I., V., VII., XI., XIII. 1901]
Congrès (XIIe) international de Médecine, Moscou, 1897.—Comptes Rendus. 7 vols. in 8 ... ... (1) 1898-1900
Grèce médicale, La 1900
Hospitals—
Johns Hopkins Hospital Reports, The ... ... Vol. VII. 1899
Indian Medical Gazette, The ... ... Vol. XXXV. 1900
International Medical Magazine ... ... Vol. IX. 1900
Iowa State Medical Society, Transactions of the ... ... Vol. XVIII. 1900
Johns Hopkins Hospital Bulletin, The ... ... Vol. XI. 1900
Journal d'Hygiène ... ... Vol. XXV. 1900
Journal of Cutaneous and Genito-Urinary Diseases ... Vol. XVIII. 1900
Journal of Laryngology, Rhinology, and Otology ... ... Vol. XV. 1900
Journal of Mental Science, The ... ... Vol. XLVI. 1900
Journal of Nervous and Mental Disease, The ... ... Vol. XXVII. 1900
Journal of the American Medical Association, The ... ... Vol. XXXV. 1900
Journal of Tropical Medicine, The ... ... Vol. III. 1900
Laryngoscope, The ... ... Vol. VIII. 1900
Librarians, Transactions and Proceedings of the Conference of, 1877 ... 1878

Llangyfelach Rural District Council—Annual Report on the Llandilo-Talybont Division for 1900 1901
Medical Age, The ... ... Vol. XVIII. 1900
Medical Annual, The 1901
Medical Examiner, The ... ... Vol. I. 1900
Medical News, The ... ... Vol. LXXVII. 1900
Medical Record, The ... ... Vol. LVIII. 1900
Medical Review ... ... Vol. III. 1900
Medical Transactions published by the College of Physicians in London (3) Vol. VI. 1820
Merck's Annual Report [on the New Medicinal Preparations] for 1900 1901
Monthly Cyclopædia of Practical Medicine, The ... N.S., Vol. III. 1900
Montreal Medical Journal, The ... ... Vol. XXIX. [1900]
Newquay, The 12th Annual Report on the Health and Sanitary Condition of the Town and Urban District of, for 1900
Ophthalmological Society of the United Kingdom, Transactions of the Vol. XX. 1900
Progrès médical, Le ... ... 3e Sér., Tomes XI., XII. 1900
St. Louis Medical and Surgical Journal, The... Vols. LXXVIII., LXXIX. 1900
St. Petersburger medicinische Wochenschrift 1900
Sanitary Institute, Transactions of the.—General Index to Vols. I.–XXI., 1876–1900 [1901]
Smithsonian Institution, Annual Report of the, for 1898... 1899
Therapeutic Gazette, The ... ... Vol. XXIV. 1900
Travaux pratiques d'Obstétrique et de Gynécologie ... ... [1899, 1900]
Treatment ... ... Vol. IV. 1901
University Medical Magazine ... ...Vols. XII., XIII. 1899–1901
West London Medical Journal ... ... Vol. V. 1900
Zeitschrift für Krankenpflege ... ...[1900]

Local Medical Notes.

GLOUCESTER, SOMERSET, AND WILTS BRANCH OF THE NATIONAL ASSOCIATION FOR CONSUMPTION.

The following is an outline of the plans of the proposed Sanatorium at Winsley, subject to the approval and possible slight modification by a sub-committee, consisting of Dr. L. A. Weatherly (Chairman of Executive), Dr. Watson Williams (Hon. Treasurer), Dr. Michell Clarke (Hon. Sec.), Dr. Davies (Medical Officer of Health for Bristol), Dr. Tubb Thomas (Medical Officer of Health for Wiltshire), Dr. Symons (Medical Officer of Health for Bath), Dr. Pruen (of the Cotswold Sanatorium), and Dr. Thurnam (of Nordrach-on-Mendip Sanatorium):

In designing the building the plans of the principal Continental Sanatoria have been consulted, and the leading features in them which experience has proved to be desirable have been adopted.

The general arrangement consists of a long main building with wings at both ends, set on the south side at an obtuse angle, thus securing for the various apartments the maximum amount of sunshine with the least exposure to the easterly winds.

On the north side the wings project at right angles to the main building, and in addition there is a large projection in the centre containing the principal entrance and hall; the kitchen and offices, together with the dining-hall over, are contained in a building separated entirely from the Sanatorium proper, and approached by a covered way and bridge.

The building has three floors, each ten feet high, consisting of a wide corridor extending nearly the entire length of the north side, with the rooms on the south; at the junction with the wings the corridor is continued, but in the centre with rooms on either side.

The ground floor contains a spacious entrance-hall, with bureau, staircase, reception-room, library, large cloak-rooms, wardrobes, and disinfecting-room; one wing is devoted to the use of the Medical Officer, and contains his dining-room, study, consultation-room, and laboratory and dispensary. Suitable apartments are provided in the other wing for the Matron, and immediately adjoining them are the linen and store rooms.

In addition to the principal staircase, others are provided at each end of the north corridor, affording easy access to all parts of the building.

A passenger-lift, capable of containing a bed or reclining chair, is also provided.

The two projecting buildings at the end of the north front contain the lavatories, bath-rooms, and w.c.'s; ample provision being made for both sexes. Especial care has been taken to entirely disconnect these from the main building; this has been done by means of a ventilated passage.

The first and second floors are given up to the bedrooms, and additional rooms have been provided in the roof for the use of the female staff.

The building will be capable of accommodating 60 patients.

A wide verandah or liegehalle runs along the south side and returns round the two wings; and additional verandahs are provided on the north side, sheltered from the east winds by the projecting buildings.

The building is to be erected with rough stone obtained from the site, and the walls will be impervious to moisture by a facing of a cement stucco.

The woodwork will be painted green and white, and the roofs will be covered with red tiles, and it is hoped that in this way a pleasing effect will be obtained.

BRISTOL.

University College.—The following appointments have been gained by former students of the Bristol Medical School:—Mr. J. E. Long, M.R.C.S., L.R.C.P., House Surgeon to the Torbay Hospital and Provident Dispensary, Torquay; Mr. L. A. Moore, M.R.C.S., L.R.C.P., House Surgeon to the Warneford, Leamington, and South Warwickshire Hospital; Mr. S. V. Stock, M.B., B.S. Lond., has passed the primary examination for the Fellowship of the Royal College of Surgeons of England.

On Monday, May 13th, a Medical Students' Dance was held in the New Hall of the College. About 220 persons attended, and the dance proved a great success.

Bristol General Hospital.—Mr. J. W. Malim, B.A., M.B., B.C. Cantab., has been appointed Casualty Officer, and Mr. A. F. Martin, M.B., Ch.B. Vict., Assistant House Surgeon.

Bristol Royal Hospital for Sick Women and Children.—We are glad to hear that the Bazaar held to obtain funds for the above

institution, and opened by Earl Roberts on May 1st, was very successful, and that upwards of £3,000 was gained for the hospital funds after deducting expenses.

APPOINTMENTS.—William Cotton, Esq., M.A., M.D., D.P.H., was appointed Medical Officer H.M. Prison, Bristol, in March. Frederick Hudson Evans, M.R.C.S. Eng., L.R.C.P. Lond., was appointed Medical Superintendent at the Mendip Hills Sanatorium for Consumption, Hill Grove, Wells, Somerset, *vice* Charles Joseph Whitby, B.A., M.D. Cantab., resigned.

THE LORD MAYOR'S HOSPITAL SUNDAY FUND.—The list of contributions to this fund collected in the various churches and chapels of the district for the year 1901, the third year in which a Hospital Sunday has been observed, are now to hand. The following tabular statement of the amounts received and their source is of interest:—

	£	s.	d.	£	s.	d.
68 Churches in the city contributed	924	14	8			
35 „ in the country „	163	11	8			
				1,088	6	4
26 Congregational Churches „				221	15	4
18 Baptist Chapels „				116	0	9
30 Wesleyan „ „				90	6	9
23 United Methodist Free Churches contributed				40	3	9
6 Roman Catholic Churches „				21	12	6
Various other Churches, &c. „				190	12	4
				£1,768	17	9

The collections were made as usual on the third Sunday in January. It will be remembered that this was the first Sunday after the death of the Queen, and consequently most of the places of worship were unusually crowded, and a correspondingly large collection—for Bristol—was made. The collection in 1900 suffered from the numerous appeals that were made for the sufferers in the war, so that in comparison the amount received this year appears specially good.

At the last meeting of the Committee it was announced that £1,768 17s. 9d. had been received, and to this must be added another guinea. The distribution was made on the plan laid down at the first meeting, and the charities received—

	£	s.	d.
Royal Infirmary	704	14	0
General Hospital	591	6	0
Children's Hospital	218	14	0
Eye Hospital	105	6	0
Eye Dispensary	5	0	0
Lock Hospital	20	0	0
Cripples' Home	30	0	0
	£1,675	0	0

In addition to these, the Bristol Dispensary was sent £35 2s. 2d. and the Medical Mission £1 1s., as the collectors specially requested that the sum sent should be allocated to these charities, so that about £60 was left for expenses and balance.

This is the largest amount yet collected, but it still falls very far short of what a rich city like Bristol should give, though it is possible that the secretaries of the institutions show such activity at other times that the stream is tapped before the collection is drawn.

We are glad to be able to say that the efforts of the Committee to obtain all the collections made on the appointed day were more successful than in previous years, the secretaries of the institutions forwarding to the Fund Committee all amounts sent direct to them. There are still a few more collections to be sent in, and a few country churches and chapels have postponed their collection till the Harvest Festival.

PREVALENCE OF DIPHTHERIA.—The Medical Officer of Health in his report to the Health Committee calls attention to the prevalence of diphtheria in the parts of the city known as Knowle and Bedminster. In the latter district during the past year there have been 210 cases, as against thirty-four in the previous year; while in Knowle there have been forty-five cases, against six in 1899. The fact that nine cases in as many houses occurred in Redcliff—six of the patients going to one school—led to an examination of ninety-two children who made use of one particular room, and fifteen unsuspected cases were discovered by bacteriological examination. In twelve cases the nose had been examined for the bacilli, which were found present in ten; and in six cases the throat had been examined, and the bacilli found in five of them. None of these cases had previously shown distinctive symptoms, illustrating the great value of the bacteriological method of investigation. Dr. Davies called attention to the great importance of recognising these cases. Nasal diphtheria was specially insidious and liable to be overlooked.

EXTENSION OF THE FEVER HOSPITAL.—When the Fever Hospital at Ham Green was built sufficient room was left for considerable enlargement. There appears to be need for further accommodation, and the following facts were communicated to the Health Committee at its meeting on April 2nd:—Built on the same lines as before, four new wards, to hold fifty-three patients and provide the necessary rooms for nurses, &c., would cost £13,300, or about £232 a bed; but, in addition to this, a further extension of the administration block would be required to afford bedrooms for the nurses and maids. According to the engineer's plans, this could be built at the back of the present block, thereby supplying room for thirteen servants and thirteen nurses—a gain of twenty-five beds, as one room would have to be sacrificed. This would cost £3,100. Designs were also brought before the Committee for a new and larger observation block, containing four wards for one bed and two wards for three beds, each at a cost of £3,260. In addition to this, £1,400 would have to be spent on water supply, drainage, electric light, and other fittings. A proposed water tower would cost £1,750, and the cost of loan and supervision is put at £550. Without including the water tower, the cost works out at £342 a bed.

THE EYE DISPENSARY.—During the past year there were 1,776 cases treated in the Eye Dispensary—a very large number when it is remembered that the institution is open only twice a week. The report calls attention to the economical manner in which the dispensary is worked, no porter or dispenser being employed, the staff, with the matron, keeping the books and dispensing what little is required. It is noted that the School Board has lately taken to sending a large number of cases, and the framers of the report express the opinion that that body should provide a medical man with a salary to undertake this important duty.

SCRAPS

PICKED UP BY L. M. G.

Clinical Records (35).—*The London Hospital Gazette* has a poem entitled "H. Brown, M.D.," by Herbert Crosse, in which occurs the following verse:—

An almost Scottish brusquerie
Adorned his personality,
So very literal was he
E'en idiom he 'd debar you.
A duchess in her languid way,
Quoth she "I 'm not myself to-day."
"Good gracious, ma'am," he 'd bellow, "Pray!
Then who the devil *are* you!"

"The English as he is Printed."—At the Restaurant Baleste, opposite La Hume Station, where Arcachon golfers leave their clubs, a correspondent of *The Traveller*, whilst sipping his quinquina, found that the label on the bottle read thus:—

"NOTICE.

"The quinquina at the coca and kola of the Doctor Cruzel is the most tractable and the most certain arms at defend the healty against the illness, or the maintenance of his integrity. The happy preparation of the Doctor Cruzel asserts in obtaining the agreeableness of the savour, puttinez up quickness of all active principles of the quinquina withant to admit those which are contained in the coca, and whole together form the best the first from all the tonics.

"The quinquina is known, acts indeed like bitter, in the first digestive conveyances it is *eupeptic, ahaleptic*, it is a tonic of the stomach, one matchless auxiliary of the nutrition in distress; but it is especially a energetic modification nutritious, depth of activity and intimate of the organs. It is a stimulate, rebuild again, and regenerator tonic.

"It is the most astringent, anather way, tonic action it is at last antisptic and in favour to this invaluable quality it possess one incontestable efficacy in numerous septical affections, the sickness to microbe.

"All the stomachs cannot adapt the same wine, this quinquina is delivered at the consommation prepared with white or black wine in the manner to fit the wishes of whole consumers."

The True Business of the Doctor.—"There is one part of their business that certain medical practitioners are too apt to forget,—namely, that what they should most of all try to do is to ward off disease, to alleviate suffering, to preserve life, or at least to prolong it if possible. It is not of the slightest interest to the patient to know whether three or three and a quarter of his lungs are hepatized. His mind is not occupied with thinking of the curious problems which are to be solved by his own autopsy, whether this or that strand of the spinal marrow is the seat of this or that form of spinal degeneration. He wants something to relieve his pain, to mitigate the anguish of dyspnea, to bring back motion and sensibility to the dead limb, to still the tortures of neuralgia. What is it to him that you can localize and name by some uncouth term the disease which you could not prevent, and which you cannot cure? An old woman who knows how to make a poultice and how to put it on, and does it *tuto, cito, jucunde*, just when and where it is wanted, is better—a thousand times better in many cases—than a staring pathologist who explores and thumps, and doubts and guesses, and tells his patient he will be better to-morrow, and so goes home to tumble his books over and make out a diagnosis."—Oliver Wendell Holmes, quoted in *University Medical Magazine*.

Medical Philology (XXXVIII.).—In a note on "Chitterlings" which I gave in the *Journal* for March, 1896, reference was made to its connection with "haggis." Further matter of interest about this word is to be found in Mr. Herrtage's note on the *Catholicon* "a Dregbaly; *Aqualiculus, porci* est *ventripotens*," which is as follows:—

'*Aqualiculus, Ventriculus, sed proprie porcorum pinguedo super umbilicum.*' Ducange. '*Ventriculus.* The stomacke. *Aqualiculus.* A parte of the belly; a paunche.' Cooper. Baret has also 'a Panch, *Rumen Aqualiculus.* A panch, or gorbellie guts, A tunbellie. *Ventrosus, ventricosus.*' '*Aqualiculus: ventriculus porci.*' Medulla. Perhaps the meaning here is the dish 'haggis.' The Ortus Vocabulorum gives '*Omasus, i.e., tripa vel ventriculus qui continet alia viscera.* A trype, or a podynge, or a wesaunt, or hagges:' and Cotgrave has '*Gogue.* A sheepes paunch, and thence a haggas made of good herbes, chopt lard, spices, eggs, and cheese, the which incorporated and moistened with the warme blood of the (new-killed) beast, are put into her paunch, and sodden with other meat.' Withals says '*Ilia porcorum bona sunt, mala reliquorum.* The intrals of Hogges are good (I thinke he meaneth that which wee commonly call Hogges-Harslet).'

Under "Hagas," one of the many forms of "Haggis," Mr. Herrtage quotes "'*Tucetum*. A puddyng or an hakeys. *Tucetarius*. A puddyng makere.' Medulla. 'A haggesse, *tucetum*.' Manip. Vocab." The quotations in the *New English Dictionary* show that although "now considered specially Scotch," haggis was "a popular dish in English cookery down to the beginning of the 18th century." I gave details of its composition in my note on Chitterlings. In a Latin and English Vocabulary of the 15th century (Wright's *Vocab.* ed. Wülcker, 567, 2) occurs "*Aumentum, ance* an hagase."

"Dregbaly" is supposed by the *New English Dictionary* to be an error for "dragbelly," signifying "a person with a large paunch," but no instance for such a word has been found.

"The Apothecary Poet."—From the "Memoir" in *The Complete Works of John Keats*, edited by Mr. H. Buxton Forman, and just published in an excellent and inexpensive form by Messrs. Gowans and Gray, I extract some passages in reference to Keats's illness, which form a pathetic addendum to the note I gave in the *Journal* for September, 1900.

On the 3rd of February, 1820, Keats's mortal illness declared itself. Brown records that on that night his friend came into the house "in a state that looked like fierce intoxication. Such a state in him," says Brown, "I knew, was impossible; it therefore was the more fearful.' I asked hurriedly, 'What is the matter? You are fevered.' 'Yes, yes,' he answered; 'I was on the outside of the stage this bitter day till I was severely chilled, but now I don't feel it. Fevered?—of course a little.' He mildly and instantly yielded—a property in his nature towards any friend—to my request that he should go to bed. I followed with the best immediate remedy in my power. I entered his chamber as he leapt into bed. On entering the cold sheets, before his head was on the pillow, he slightly coughed, and I heard him say, 'This is blood from my mouth.' I went towards him; he was examining a single drop of blood upon the sheet. 'Bring me the candle, Brown, and let me see this blood.' After regarding it steadfastly, he looked up in my face, with a calmness of countenance that I can never forget, and said, 'I know the colour of that blood; it is arterial blood—I cannot be deceived in that colour. That drop of blood is my death-warrant; I must die.' I ran for a surgeon; my friend was bled; and, at five in the morning, I left him after he had been some time in a quiet sleep." Fanny Brawne's account of the actual commencement of this mortal illness, though less picturesque and circumstantial, has a distinct value. She says it "began from inflammation in the lungs, from cold," and adds—"In coughing, he ruptured a blood-vessel. An hereditary tendency to consumption was aggravated by the excessive susceptibility of his temperament, for I never see those lines of Dryden without thinking how exactly they applied to Keats:—

> The fiery soul, that working out its way,
> Fretted the pigmy body to decay.

From the commencement of his malady he was forbidden to write a line of poetry, and his failing health, joined to the uncertainty of his prospects, often threw him into deep melancholy." After fresh attacks of bleeding from the lungs on the 22nd and 23rd of June, 1820, the doctors told him that another winter in England would be fatal; and here was a fresh and terrible complication. No wonder that when John and Maria Gisborne, as recorded in her manuscript journal, drank tea at Hunt's on the 12th of July, the glory had departed. "I was much pained," she wrote, "by the sight of poor Keats, under sentence of death from Dr. Lamb. He never spoke and looks emaciated." By the middle of November he was in Rome and settled in a lodging in the Piazza di Spagna, in the first house on the right-hand side as one ascends the beautiful stairway of the Trinità dei Monti. Repeated attacks of hæmoptysis brought about the end on February 23, 1821. Severn, who was with him, says, in a letter on the 27th; "He is gone; he died with the most perfect ease—he seemed to go to sleep. On the 23rd, about four, the approaches of death came on. 'Severn—I—lift me up—I am dying—I shall die easy; don't be frightened—be firm, and thank God it has come.' I lifted him in my arms. The phlegm seemed boiling in his throat, and increased until eleven, then he gradually sunk into death, so quiet, that I still thought he slept."